

## SEQUENCE LISTING

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<110> Juha Punnonen, et al.
<120> NOVEL CO-STIMULATORY MOLECULES
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<140> 09/888,324
<141> 2001-06-22
<150> 60/213,946
<151> 2000-06-23
<150> 60/241,245
<151> 2000-10-17
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accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtqatt acaacqcatc cactqaaqaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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eccegtattg tgateetgge tetgegeetg teggacaagg geacetacae etgegtggtt 360
caqaaqaatg aqaacgggtc tttcagacgg gagcacctga cctccgtgac actgtccatc 420
agagetgaet teeetgteee tageataaet gaeattggae ateeegeeee taatgtgaaa 480
aggataagat geteegeete tggaggtttt ceagageete geetegeetg gatggaagat 540
qqaqaaqaac taaacqccqt caacacqacq gttgaccagq atttggacac gqaqctctac 600
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cccattgatc agettecatt ctgggtcatt atcccagtaa gtggtgcttt ggtgctcact 780
gcggtagttc tctactgcct ggcctgcaga catgttgcga ggtggaaaag aacaagaagg 840
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cagaagectg ttttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
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tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
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atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
gatgqaqaaq aactaaacgc cqtcaacacg acggttgacc aggatttgga cacggagctc 600
tacagegtea geagtgaact ggattteaat gtgacaaata accacageat egtgtgtete 660
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gacttccctg tccctaccat aaatgatctt ggaaatccat ctcctaatat cagaaggcta 480
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gatcagette cattetgggt cattateeca gtaagtggtg etttggtget caetgeggta 780
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cagaageetg ttttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttggaa 540
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
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cagaagectg ttttgaaagg ggettataaa ctggageace tgaetteegt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa titgeteaac etetggaggt titteeaagge eeeaceteta etggitggaa 540
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aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600

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cccattgatc agettccatt ctgggtcatt atcccagtaa gtggtgcttt ggtgctcact 780
gtggtagttc tctactgcct ggcctgcaga catgttgcga ggtggaaaag aacaagaagg 840
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<210> 22
<211> 867
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      nucleotide sequence
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
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agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660

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gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
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<210> 23
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
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tatqaaaaaq atqctttcaa qcqaqaacac ctqqctgaag tgacgttatc agtcaaagct 420
gacttcccta cacctagtat aactgacttt gaaattccac cttctaacat tagaaggata 480
atttgeteaa eetetggagg titteeagag eetegeetet eetggitigga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatgctgtt 600
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ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780
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<210> 24
<211> 867
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<213> Artificial Sequence
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
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atttgctcaa cctctggagg ttttccagag cctcacctct tctggctgga aaatggagaa 540
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ggacatttaa gagtgaatca gaccttcaac tggaatacaa ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780
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<213> Artificial Sequence
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
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gataacctgc tcccatcctg ggccattacc ttaatctcag caaatggaat ttttgtgata 780
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<210> 26
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<212> DNA
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
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gaagtgaaag aagtggcaac gctgtcctgt ggtctcaatg tttctgttga agagctggca 180
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<211> 865
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<210> 28
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<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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<211> 867
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<212> DNA

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gataacccac teccateetg ggeeattace ttaateteag caaatggaat ttttgtgata 780
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      nucleotide sequence
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gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
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<220>

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caaactcqca tccactqqca aaaqqaqaaq aaaatqqtqc tgactatqat gtctggqqac 240
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qaattaaatq ccatcaacac aacaqtttcc caaqatcctq aaactggqct ctatactgtt 600
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gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
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     nucleotide sequence
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qqacatttaa qaqtqaatca qaccttcaac tqqaatacac ccaaqcaaqa qcattttcct 720
qataacctqc tcccatcctq qqccattacc ttaatctcaq taaatqqaat ttttqtqata 780
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<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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gataacctgc tcccatcctg ggccattacc ttaatctcag caaatggaat ttttgtgata 780
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attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag. 360
tatgaaaaag acgettteaa gegagaacae etggetgaag tgatgttate egteaaaget 420
gacttcccta cacctagtat atctgacttt gaaattccaa cttctaacat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacagcc aatcacagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
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<210> 44
<211> 867
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
<400> 44
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgatgttatc agtcaaagct 420
gacttcccta cacctagtat aactgacttt gaaattccac cttctaacat tagaaggata 480
atttgctcag cctctggagg ttttccagag cctcacctct tctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaggtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teccatectg ggccattace etaateteag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaagagcaa tgagagactg 840
                                                                  867
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<210> 45
<211> 868
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
<400> 45
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cagetettgg tgetggettg tettteteat ttetgtteag gtgttateea egtgaceaag 120
gaaqtgaaaq aaqtgqcaac qctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat qqcccqaqta caaqaaccqq accatctttq atatcactaa taacctctcc 300
attqtqattc tqqctctqcq cccatctqac qaqqqcacat acqaqtqtqt tqttctqaag 360
tatgaaaaag acgctttcaa gcgagaacac ctggctgaag tgatgttatc cgtcaaagct 420
gactteecta cacctagtat aactgacttt gaaatteeac ettetaacat tagaaggata 480
atttgctcaa cctccggagg ttttccagag cctcacctct cctggctgga aaatggagaa 540
quattaaatq ccatcaacac aacagcttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaagagcaa tgagagactg 840
                                                                   868
agaagggaaa gtgtacgccc tgtatgag
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<210> 46
<211> 867
<212> DNA
<213> Papio sp.
<400> 46
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cagetettgg tgetggettg tettteteat ttetgtteag gtgttateea egtgaceaag 120
gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atqaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag atgctttcaa gcgagaacac ctggctgaag tgatgttatc cgtcaaagct 420
gacttcccta cacctagtat aactgacttt gaaattccac cttctaacat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct tctggttgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcacagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgttt tgccccaaga tgcagagaga gaagaaggaa tgagacattg 840
agaagggaaa gtgtacgccc tgtatga
<210> 47
<211> 867
<212> DNA
<213> Pongo pygmaeus
<400> 47
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cagetettgg tgetggetag tettteteae ttetgtteag gtgttateea egtgaceaag 120
gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgatcc tggctctgcg cccatctgac gagggcacat atgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgacgttatc ggtcaaagct 420
gacttcccta cacctagtat atctgacttt gaaattccaa cttctaatat tagaaggatg 480
atttgctcaa cctctggagg ttttccagag cctcacctct cctggttgga aaatggagaa 540
gaattaaatg ccatcagcac aacagtttcc caagatcctg aaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggagcaa tgagagactg 840
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<210> 48
<211> 296
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      peptide
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Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 190

Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly 210 215 220

Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 225 230 235 240

Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser 245 250 255

Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 270

Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu 275 280 285

Met Gln Ser Cys Ser Gln Ser Pro 290 295

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<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
     peptide |
<400> 49
Met Gly His Thr Leu Arg Pro Gly Thr Pro Leu Pro Arg Cys Leu His
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Leu Lys Leu Cys Leu Leu Leu Ala Leu Ala Gly Leu His Phe Ser Ser
             20
Gly Ile Ser Gln Val Thr Lys Ser Val Lys Glu Met Ala Ala Leu Ser
Cys Asp Tyr Asn Ile Ser Ile Asp Glu Leu Ala Arg Met Arg Ile Tyr
     50
                         55
Trp Gln Lys Asp Gln Gln Met Val Leu Ser Ile Ile Ser Gly Gln Val
Glu Val Trp Pro Glu Tyr Lys Asn Arg Thr Phe Pro Asp Ile Ile Asn
                                     90
Asn Leu Ser Leu Met Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr
Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe Arg Arg Glu
                            120
His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Ser Pro Val Pro
    130
                        135
Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg
                    150
Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met Glu
                                    170
Asp Gly Glu Leu Asn Ala Val Asn Thr Thr Val Asp Gln Asp Leu
            180
Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe Asn Val Thr
Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val
                                            220
Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp
                    230
Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu
                245
                                    250
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<210> 49 <211> 299

Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp
260 265 270

Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser 275 280 285

Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295

<210> 50

<211> 299

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 50

Met Gly His Thr Leu Arg Pro Gly Thr Pro Leu Pro Arg Cys Leu His

1 10 15

Leu Lys Leu Cys Leu Leu Leu Ala Leu Ala Gly Leu His Phe Ser Ser 20 25 30

Gly Ile Ser Gln Val Thr Lys Ser Val Lys Glu Met Ala Ala Leu Ser 35 40 45

Cys Asp Tyr Asn Ile Ser Ile Asp Glu Leu Ala Arg Met Arg Ile Tyr
50 60

Trp Gln Lys Asp Gln Gln Met Val Leu Ser Ile Ile Ser Gly Gln Val 65 70 75 80

Glu Val Trp Pro Glu Tyr Lys Asn Arg Thr Phe Pro Asp Ile Ile Asn 85 90 95

Asn Leu Ser Leu Met Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr
100 105 110

Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe Arg Arg Glu
115 120 125

His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe Pro Val Pro 130 135 140

Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg 145 150 155 160

Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu Ala Trp Met Glu 165 170 175

Asp Gly Glu Leu Asn Ala Val Asn Thr Thr Val Asp Gln Asp Leu 180 185 190 Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe Asn Val Thr 200 Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val 215 Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp 230 Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu 250 Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser 280 Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly <210> 51 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 51 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 5 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45 Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 115 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp

130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp-195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His
260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 52

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 52

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 180 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 53 <211> 303 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 53 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

5

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 40 Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 220 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Arg Pro Ala Cys Arg His 260 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly

<210> 54 <211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 54

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp
85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His

260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 55

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 55

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Cys Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 300 <210> 56 <211> 303 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 56 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 45 35 Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Pro Val Leu Lys Gly Ala 120 125 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp

140

135

130

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 180 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 270 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 57 <211> 303 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 45 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 100 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200

195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly
210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr
275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 58

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 58

Met Gly His Thr Met Lys Trp Arg Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly

<210> 59

290

<211> 303

<212> PRT

<213> Artificial Sequence

295

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 59

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 145 150 155 160

Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu 165 170 175

Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 180 185 190

Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 195 200 205

Ser Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 60 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 60 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly

210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr
275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 61

<211> 303

<212> PRT

<213> Artificial Sequence

<220:

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 61

Met Gly His Thr Met Lys Trp Arg Ser Leu Pro Pro Lys Arg Pro Cys

1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 Val Ala Arq Trp Lys Arq Thr Arq Arq Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 62 <211> 302 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 62 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val . 35 Met Leu Ser Cys Asp Tyr Asn Ala Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 70 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 85

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala 170 Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp 180 185 Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe 200 Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 210 215 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro 230 Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala 250 Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val 260 Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly <210> 63 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 63 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly

295

<210> 64

<211> 303

290

<212> PRT

<213> Artificial Sequence

<220>

## <223> Description of Artificial Sequence: Synthetic peptide

-400															
	0> 64 Gly		Thr	Met 5	Lys	Trp	Gly	Ser	Leu 10	Pro	Pro	Lys	Arg	Pro 15	Cys
Leu	Trp	Leu	Ser 20	Gln	Leu	Leu	Val	Leu 25	Thr	Gly	Leu	Phe	Tyr 30	Phe	Суѕ
Ser	Gly	Ile 35	Thr	Pro	Lys	Ser	Val 40	Thr	Lys	Arg	Val	Lys 45	Glu	Thr	Val
Met	Leu 50	Ser	Сув	Asp	Tyr	Ser 55	Thr	Ser	Thr	Glu	Glu 60	Leu	Thr	Ser	Leu
Arg 65	Ile	Tyr	Trp	Gln	Lys 70	Asp	Ser	Lys	Met	Val 75	Leu	Ala	·Ile	Leu	Pro 80
Gly	Lys	Val	Gln	Val 85	Trp	Pro	Glu	Tyr	Lys 90	Asn	Arg	Thr	Ile	Thr 95	Asp
Met	Asn	Asp	Asn 100	Pro	Arg	Ile	Val	Ile 105	Leu	Ala	Leu	Arg	Leu 110	Ser	Asp
Ser	Gly	Thr 115	Tyr	Thr	Cys	Val	Ile 120	Gln	Lys	Pro	Val	Leu 125	Lys	Gly	Ala
Tyr	Lys 130	Leu	Glu	His	Leu	Ala 135	Ser	Val	Arg	Leu	Met 140	Ile	Arg	Ala	Asp
Phe 145	Pro	Val	Pro	Thr	Ile 150	Asn	Asp	Leu	Gly	Asn 155	Pro	Ser	Pro	Asn	Ile 160
Arg	Arg	Leu	Ile	Cys 165	Ser	Thr	Ser	Gly	Gly 170	Phe	Pro	Glu	Pro	Arg 175	Leu
Ala	Trp	Met	Glu 180	Asp	Gly	Glu	Glu	Leu 185	Asn	Ala	Val	Asn	Thr 190	Thr	Val
Asp	Gln	Asp 195	Leu	Asp	Thr	Glu	Leu 200	Tyr	Ser	Val	Ser	Ser 205	Glu	Leu	Asp
Phe	Asn 210	Val	Thr	Asn	Asn	His 215	Ser	Ile	Val	Cys	Leu 220	Ile	Lys	Tyr	Gly
Glu 225	Leu	Ser	Val	Ser	Gln 230	Ile	Phe	Pro	Trp	Ser 235	Lys	Pro	Lys	Gln	Glu 240
Pro	Pro	Ile	Asp	Gln 245	Leu	Pro	Phe	Trp	Val 250	Ile	Ile	Pro	Val	Ser 255	Gly
Ala	Leu	Val	Leu 260	Thr	Ala	Val	Val	Leu 265	Tyr	Cys	Leu	Ala	Cys 270	Arg	His
Val	Ala	Arg 275	Trp	Lys	Arg	Thr	Arg 280	Arg	Asn	Glu	Glu	Thr 285	Val	Gly	Thr

Glu Arg Leu 290	Ser Pro	Ile Tyr 295	Leu	Gly	Ser	Ala	Gln 300	Ser	Ser	Gly				
<210> 65 <211> 300 <212> PRT <213> Artificial Sequence														
<220> <223> Description of Artificial Sequence: Synthetic peptide  <400> 65														
<400> 65 Met Gly His 1	Thr Leu 5	Arg Pro	Gly	Thr	Pro 10	Leu	Pro	Arg	Cys	Leu 15	His			
Leu Lys Leu	Cys Leu 20	Leu Leu	Ala	Leu 25	Ala	Gly	Leu	His	Phe 30	Ser	Ser			
Gly Ile Ser 35	Gln Val	Thr Lys	Ser 40	Val	Lys	Glu	Met	Ala 45	Ala	Leu	Ser			
Cys Asp Tyr 50	Asn Ile	Ser Ile 55	Asp	Glu	Leu	Ala	Arg 60	Met	Arg	Ile	Tyr			
Trp Gln Lys 65	Asp Gln	Gln Met 70	Val	Leu	Ser	Ile 75	Ile	Ser	Gly	Gln	Val 80			
Glu Val Trp	Pro Glu 85	Tyr Lys	Asn	Arg	Thr 90	Ile	Thr	Asp	Met	Asn 95	Asp			
Asn Pro Arg	Ile Val 100	Ile Leu	Ala	Leu 105	Arg	Leu	Ser	Asp	Ser 110	Gly	Thr			
Tyr Thr Cys 115	Val Ile	Gln Lys	Pro 120	Val	Leu	Lys	Gly	Ala 125	Tyr	Lys	Leu			
Glu His Leu 130	Ala Ser	Val Arg 135		Met	Ile	_	Ala 140	_	Phe	Pro	Val			
Pro Thr Ile 145	Asn Asp	Leu Gly 150	Asn	Pro	Ser	Pro 155	Asn	Ile	Arg	Arg	Leu 160			
Ile Cys Ser	Thr Ser 165	Gly Gly	Phe	Pro	Arg 170	Pro	His	Leu	Tyr	Trp 175	Leu			
Glu Asn Gly	Glu Glu 180	Leu Asn	Ala	Thr 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp			
Pro Gly Thr 195	Glu Leu	Tyr Met	Ile 200	Ser	Ser	Glu	Leu	Asp 205	Phe	Asn	Val			
Thr Asn Asn 210	His Ser	Ile Val 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	Glu	Leu	Ser			

Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile 230 235 Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val 245 250 Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu 280 285 Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 300 295 <210> 66 <211> 303 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 66 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 10 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Pro Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 155 150

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu

165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly
210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His
260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 67

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 67

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 130 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Ala Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 260 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 <210> 68 <211> 302 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 68 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Phe Pro Asp Ile Ile Asn Asn Leu Ser Leu Met Ile Leu Ala Leu Arg Leu Ser Asp 105 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 135 Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu Ala 165 170 Trp Met Glu Asp Gly Glu Leu Asn Ala Val Asn Thr Thr Val Asp 180 185 Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe 200 205 Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 215 210 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro 230 Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala 250 255 Leu Val Leu Thr Val Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 280 Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295

<210> 69

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400	)> 69	•													
Met 1	Gly	His	Thr	Arg 5	Arg	Gln	Gly	Ile	Ser 10	Pro	Ser	Lys	Cys	Pro 15	Tyr
Leu	Lys	Phe	Phe 20	Gln	Leu	Leu	Val	Leu 25	Ala	Gly	Leu	Ser	His 30	Phe	Cys
Ser	Gly	Val 35	Ile	His	Val	Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser	Cys 50	Gly	His	Asn	Val	Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
His 65	Trp	Gln	Lys	Glu	Lys 70	Lys	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met	Asn	Ile	Trp	Pro 85	Glu	Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn	Asn	Leu	Ser 100	Ile	Val	Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr	Tyr	Glu 115	Cys	Val	Val	Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu	His 130	Leu	Ala	Glu	Val	Thr 135	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro 145	Ser	Ile	Ser	Asp	Phe 150	Glu	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile	Cys	Ser	Thr	Ser 165	Gly	Gly	Phe	Pro	Glu 170	Pro	His	Leu	Ser	Trp 175	Leu
Glu	Asn	Gly	Glu 180	Glu	Leu	Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro	Gly	Thr 195	Glu	Leu	Tyr	Thr	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr	Thr 210	Asn	His	Ser	Phe	Met 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val 225	Asn	Gln	Thr	Phe	Asn 230	Trp	Asn	Thr	Pro	Lys 235	Gln	Glu	His	Phe	Pro 240
Asp	Asn	Leu	Leu	Pro 245	Ser	Trp	Ala	Ile	Thr 250	Leu	Ile	Ser	Val	Asn 255	Gly

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 70 Met Gly Tyr Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Leu Cys Ser Gly Val Ile His Val Thr Asn Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Gly Glu Glu Leu Ala Gln Thr Arg Ile Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Tyr Gly Asp 75 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Leu Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met 165 170 Lys Asp Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp 185 Pro Gly Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 Val Asn Gln Thr Phe Ser Trp Asn Thr Pro Lys Gln Glu His Phe Pro

<210> 70 <211> 288

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270

Glu Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 . 280 . 285

<210> 71

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 71

Met Ser His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr

1 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Met Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val His Pro Val 275 280 285

<210> 72

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 72

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg

115 120 125

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Gly Leu 165 170 175

Glu Asn Gly Glu Glu Ile Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Pro Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 73

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 73

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60 Met Asn Ile Trp Pro 85 Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 110 Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130

Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp Pro Glu Thr 185

Glu Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp

70

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

215

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270

Glu Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 74

210

65

<211> 287

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic neptide

<400> 74

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Pro Lys Cys Pro Tyr Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 70 75 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val

<210> 75 <211> 288

280

<212> PRT <213> Art

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 75

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asp Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg

260 265 270

Glu Arg Lys Ser Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 76

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 76

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Lys Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Asp Asn Pro Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 280 285 <210> 77 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 77 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 10 Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 20 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Thr Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile

155

150

160

145

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 195 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Arg Phe Ala Pro Arg Cys Arg Glu Arq Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 <210> 78 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 78 Met Gly Tyr Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 25 Ser Gly Val Ile His Val Thr Arg Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 55 His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 70 75 65 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

105

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg

115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 160 

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu 170 

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 190 

Pro Glu Thr 195 

Glu Thr 195 

Gly Leu Tyr Thr Val Ser Lys Leu Asp Phe Asn Met 205 

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro

225 230 235 240
Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg

250

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val 275 280 285

<210> 79 <211> 288 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 79

Met Ser His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys 20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
35 40 45

Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 . 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Gly Ile Asn Thr Thr Val Ser Gln Asp 180 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 225 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val His Pro Val 275 280

<210> 80 <211> 288 <212> PRT <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 80

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15

Leu Asn Phe Phe Arg Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 105 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Gly Phe Pro Thr 130 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val

<210> 81

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

280

## peptide

	)> 81 Ser		Thr	Arg	Arg	Gln	Gly	Thr	Ser	Pro	Ser	Lys	Cys	Pro	Tyr
1				5					10				•	15	
Leu	Lys	Phe	Phe 20	Gln	Leu	Leu	Val	Leu 25	Ala	Ser	Leu	Ser	His 30	Phe	Сув
Ser	Gly	Val 35	Ile	His	Met	Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser	Cys 50	Gly	His	Asn	Val	Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
Tyr 65	Trp	Gln	Lys	Glu	Lys 70	Lys	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met	Asn	Ile	Trp	Pro 85	Glu	Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn	Asn	Leu	Ser 100	Ile	Val	Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr	Tyr	Glu 115	Cys	Val	Val	Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Gln
Glu	His 130	Leu	Ala	Glu	Val	Met 135	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro 145	Ser	Ile	Thr	Asp	Phe 150	Glu	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile	Cys	Ser	Thr	Ser 165	Gly	Gly	Phe	Pro	Glu 170	Pro	His	Leu	Phe	Trp 175	Leu
Glu	Asn	Gly	Glu 180	Glu	Leu	Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro	Glu	Thr 195	Glu	Leu	Tyr	Ala	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr	Thr 210	Asn	His	Ser	Phe	Val 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val 225	Asn	Gln	Thr	Phe	Asn 230	Trp	Asn	Thr	Pro	Lys 235	Gln	Glu	His	Phe	Pro 240
Asp	Asn	Leu	Leu	Pro 245	Ser	Trp	Ala	Ile	Thr 250	Leu	Ile	Ser	Ala	Asn 255	Gly
Ile	Phe	Val	Ile 260	Cys	Cys	Leu	Thr	Tyr 265	Cys	Phe	Ala	Pro	Arg 270	Cys	Arg
Glu	Arg	Arg 275	Arg	Asn	Glu	Arg	Leu 280	Arg	Arg	Glu	Ser	Val 285	His	Pro	Val

<211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 82 Met Gly Tyr Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 25 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 40 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 55 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 70 65 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu .170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 240

<210> 82

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly

245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val His Pro Val 275 280 285

<210> 83

<211> 288

<212> PRT

<213> Artificial Sequence

<2205

<223> Description of Artificial Sequence: Synthetic peptide

<400> 83

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Ser Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 <210> 84 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 84 Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 5 Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 Tyr Trp Gln Lys Gly Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile

150

145

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Ala Tyr Cys Phe Ala Pro Gly Cys Arg
260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 85

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 85

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Leu Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

Thr Tyr Glu Cys Val Val Leu Lys Tyr Asp Lys Asp Ala Phe Lys Arg

115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 135 140 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Arg Phe Ala Pro Arg Cys Arg 265

<210> 86

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 86

Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys 20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

85 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Arg Phe Ala Pro Arg Cys Arg Glu Arg Lys Ser Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285 <210> 87 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 87 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 5

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr

Leu Lys Phe Phe Gln Leu Leu Val Met Ala Cys Leu Ser His Phe Cys

25

20

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 55 His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 145 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 190 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val 280 285 275

<210> 88

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400>	88													
Met G	ly Hi	is Thi	Arg 5	Arg	Gln	Gly	Ile	Ser 10	Pro	Ser	Lys	Cys	Pro 15	Tyr
Leu L	ys Pł	ne Phe 20		Leu	Leu	Val	Leu 25	Ala	Cys	Leu	Ser	His 30	Phe	Cys
Ser G	_	al Ile	e His	Val	Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser C	ys G] 50	ly Let	ı Asn	Val	Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
His T	rp Gl	ln Lys	s Glu	Lys 70	Lys	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met A	sn I]	le Tr	Pro 85	Glu	Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn A	sn Le	eu Sei 100		Val	Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr T	yr Gl 11	_	Val	Val	Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu H	is Le 30	eu Ala	a Glu	Val	Met 135	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro Se 145	er Il	le Sei	Asp	Phe 150	Glu	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile C	ys Se	er Thi	Ser 165	Gly	Gly	Phe	Pro	Glu 170	Pro	His	Leu	Ser	Trp 175	Leu
Glu A	sn Gl	ly Glu 180		Leu	Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro G	lu Th		ı Leu	Tyr	Ala	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr Ti	hr As 10	sn His	s Ser	Phe	Met 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val A: 225	sn G	ln Thi	r Phe	Asn 230	Trp	Asn	Thr	Pro	Lys 235	Gln	Glu	His	Phe	Pro 240
Asp A	sn Le	eu Lei	245	Ser	Trp	Ala	Ile	Thr 250	Leu	Ile	Ser	Val	Asn 255	Gly
Ile P	he Va	al Ile 260	_	Cys	Leu	Thr	Tyr 265	Cys	Phe	Ala	Pro	Arg 270	Cys	Arg
Glu A	_	rg Arg	g Asn	Glu	Thr	Leu 280	Arg	Arg	Glu	Ser	Val 285	Arg	Pro	Val

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<211> 288
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      peptide
<400> 89
Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Pro His Leu Cys
Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
     50
His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
            100
Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
                            120
Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr
    130
                        135
                                             140
Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile
Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
                                    170
Glu Asn Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp
            180
Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met
Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
                                             220
Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
                    230
                                        235
Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly
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<210> 89

245

250

Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg Glu Arg Lys Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 <210> 90 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 90 Met Ser His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Leu Cys 20 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 70 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 110 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 145 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met

205

200

195

Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 <210> 91 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 10 Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 125 115 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155

Ile Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu

165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Arg Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

· <210> 92

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 92

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Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 <210> 93 <211> 288 <212> PRT <213> Papio sp. <400> 93 Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 20 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr

130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 94

<211> 288

<212> PRT

<213> Pongo pygmaeus

<400> 94

Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 85 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 115 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Met 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val <210> 95 <211> 912 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic nucleotide sequence <220> <221> modified base <222> (213) <223> A, T, C, G, other or unknown <400> 95 atgggtcaca caatgaagtg gggatcacta ccacccaagc gcccatgcct ctggctctct 60

cagetettgg tgeteactgg tettttttae ttetgtteag geateaceee aaagagtgtg 120

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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcgaaag gatagtaaaa tgntgctggc catcctgcct 240
qqaaaaqtgc aggtgtggcc tgagtacaag aaccgtacca tcactgacat gaacgataac 300
ctccqtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
caqaaqcctq atttgaaaqq qqcttataaa ctgqagcacc tgacttccgt gaggttaatg 420
atcaqaqctq acttccctqt ccctaccata aatgatcttg gaaatccatc tcctaatatc 480
agaaggctaa tttgctcaac ctctggaggt tttccaaggc cccacctcta ctggttggaa 540
aatqqaqaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatqatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtt ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattq atcaqcttcc attctqqqtc attatcccaq taaqtqgtqc tttggtqctc 780
actgcqqtaq ttctctactq cctqqcctqc agacatgttq cgaqgtggaa aagaacaaga 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
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tcctcgggct ga
<210> 96
<211> 912
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<220>
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      nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
caqaaqcctq ttttqaaaqq qqcttataaa ctqqaqcacc tqacttccqt qaggttaatg 420
atcagagetg acttecetgt coctaceata aatgatettg gaaateeate tectaatate 480
agaaggctaa tttgctcaac ctctggaggt tttccaaggc cccacctcta ctggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgoggtag ttototactg cotggootgo agacatgttg ogaggtggaa aagaacaaga 840
aggaatgaag agacagtggg aaccgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
                                                                  912
tcctcgggct ga
<210> 97
<211> 930
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<220>
<221> modified_base
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<223> A, T, C, G, other or unknown
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accaaaaqaq tqaaagaaac agtaatqcta tcctqtqatt acaacacatc cactgaaaaa 180
ctgacaaqcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
caqaaqcctq ttttgaaagg ggcttataaa ctggagcacc tgacttccgt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
aqaaqqctaa tttqctcaac ctctqqaqqt tttccaaqqc cccacctcta ctggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctga aaccaagctc 600
tacatqatta qcaqtqaact qqatttcaat qtqacaaata accacaqcat cqtqtgtctc 660
atcaaatacq gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actqcqqtaq ttctctactg cccqqcctqc aqacatqttg cgaggtggaa aagaacaaga 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
tctcgggctg aggtaccaag cttaagttna
                                                                  930
<210> 98
<211> 912
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
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accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtqatt acaacacatc cactqaaqaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
eccegtattg tgateetgge tetgegeetg teggacagtg geacetacae etgtgttatt 360
cagaageetg ttttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatqqaqaaq aattaaatqc taccaacaca acaqtttccc aaqatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
ceteceattg atcagettee attettggte attateceag taagtggtge tttggtgete 780
actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
aqqaatqaaq agacaqtqqq aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
                                                                   912
tectegget ga-
<210> 99
<211> 912
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaaqcctq ttttqaaaqq qqcttataaa ctqqaqcacc tqqcttccqt gagqttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat tgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacag atcttccctt ggaqcaaacc caagcaggag 720
cctcccattq atcaqcttcc attccqqqtc attatcccaq taaqtgqtqc tttqqtqctc 780
actqcqataq ttctctactq cctqqcctqc aqacatqttq cqaqqtqqaa aaqaacaaqa 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
                                                                   912
tcctcgggct ga
<210> 100
<211> 912
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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cagetettgg tgeteactgg tettttttae ttetgtteag geateacece aaagagtgtg 120
accaaaaqaq tgaaaqaaac agtaatgcta tcctgtgatt acaacacatc cactgaaqaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaaqtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ecceptatty tyatectyge tetgegeety teggacagty geacetaeae etgtyttatt 360
cagaageetg ttttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
atcagagetg acttecetgt ecetaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttggaa 540
aatqqaqaaq aattaaatqc taccaacaca acagtttccc aaqatcctqq aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
ceteceattg ateagettee attetgggte attateceag taagtggtge tttggtgete 780
actgcqqtaq ttctctactq cctqqcctqc aqacatqttq cqaqqtqqaa aaqaacaaqa 840
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                                                                   912
teeteggget ag
<210> 101
<211> 909
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<213> Artificial Sequence
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      nucleotide sequence
<400> 101
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accaaaagag tgaaagaaac agtaatgcca tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgcgtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cctccgtgac actgtccatc 420
aqaqctqact tccctqtccc tagcataact gacattgqac atcccqcccc taatgtgaaa 480
aggataagat geteegeete tggaggtttt eeagageete geetegeetg gatggaagat 540
ggagaagaac taaacgccgt caacacaacg gttgaccagg atttggacac ggagctctac 600
agcqtcaqca gtgagctgga tttcaatgtg acaaataacc acagcatcgt gtgtctcatc 660
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cccattqatc agcttccatt ctqqqtcatt atcccaqtaa qtqqtqcttt ggtgctcact 780
qcqqtaqttc tctactqcct qqcctqcaqa catqttqcqa qgtqqaaaaq aacaaqaagg 840
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tcgggctga
<210> 102
<211> 912
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacaagg gcacctacac ctgtgttatt 360
caqaaqcctq ttttqaaaqq qqcttataaa ctqqaqcacc tqqcttccqt gagqttaatq 420
atcagagetg acttecetgt cectaceata aatgatettg gaaatceate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacgaga 840
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                                                                  912
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<210> 103
<211> 891
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 103
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ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
eccegtattg tgatectgge tetgegeetg teggacagtg geacetaeae etgtgttatt 360
cagaagcctg ttttgaaagg ggcttataaa ctggagcacc tgacttccgt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaagqctaa tttgctcaac ctctggaggt tttccaaggc cccacctcta ctggttggaa 540
aatggaqaaq aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaac atgacaagca atcacagctt cttgtgtctt 660
qtcaaqtatq qaqacttaac aqtqtcacaq accttctact qqcaaqaatc caaaccaacc 720
ccttctgcta atcagcacct gacctggacc attattatcc cagtctcagc attttgggatt 780
tctqtqatca ttqcaqttat actaacatqc ctqacctqca qaaatqctqc aatacqcaqa 840
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<210> 104
<211> 892
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqqcc tqaqtacaag aaccqcacca tcactqacat gaacqataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagcctg atttgaaagg ggcttataaa ctggagcacc tgacttccgt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate tectaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaac atgacaagca atcacagctt cttgtgtctt 660
gtcaagtatg gagacttaac agtgtcacag accttctact ggcaagaatc caaaccaacc 720
ccttctgcta atcagcacct gacctggacc attattatcc cagtctcagc atttgggatt 780
tctqtqatca ttqcaqttat actaacatqc ctqacctqca gaaatqctqc aatacqcaqa 840
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<210> 105
<211> 828
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<220>
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      nucleotide sequence
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cagetetigg tgeteactgg tettittae ttetgticag geateacee aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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qqaaaaqtqc aqqtqtqqcc tqaqtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacaagg gcacctacac ctgtgttatt 360
cagaagectg ttttgaaagg ggettataaa etggageace tgaceteegt gacaetgtee 420
atcagagetg acttecetgt cectageata actgaeattg gaeateeege cectaatgtg 480
gatggagaag aactaaacgc cgtcaacacg acggttgacc aggatttgga cacggagctc 600
tacagogtca gcagtgaact ggatttcaat gcgacaaata accacagcat cgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacaq atcttccctt qqaqcaaacc caaqcaqqaq 720
cctcccattg atcagcttcc attctgggtc attgtcccag taagtggtgc tttggtgctc 780
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<211> 912
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqqcc tqaqtacaaq aaccqcacca tcactqacat qaacqataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagectg ttttgaaagg ggettataaa ctggageace tgactteegt gaggttaatg 420
atcagagetg actteeetgt ecctaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacaq atcttccctt qqaqcaaacc caaqcaqqaq 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
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<211> 912
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccqcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg qcacctacac ctqtgttatt 360
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cagaagectg ttttgaaagg ggettataaa ctggageace tgaetteegt gaggttaatg 420

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agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgcgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacaq atcttccctt ggaqcaaacc caaqcaqqaq 720
cctcccattq atcaqcttcc attctqqqtc attatcccaq taaqtqqtqc tttqqtqctc 780
actgcqqtaq ttctctactq cctqqcctqc aqacatqttq cqaqqtqqaa aaqaacaaqa 840
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqqcc tqaqtacaaq aaccqcacca tcactqacat qaacqataac 300
eccegtattg tgatectgge tetgegeetg teggacagtg geacetaeae etgtgttatt 360.
cagaagectg ttttgaaagg ggettataaa ctggageace tggetteegt gaggttaatg 420
atcagagetg actteeetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgcggtag ttctctactg cctggcctgc agacatggtg cgaggtggaa aagaacaaga 840
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<210> 109
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      nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctqqc tctqcgcctg tcggacaqtg gcacctacac ctgtgttatt 360
cagaageetg atttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
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atcagagetg acttecetgt cectageata actgaeattg gaeateeege cectaatgtg 480

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tacagcgtca gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattq atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgcqqtaq ttctctactg cctqgcctqc agacatgttg cgaqqtggaa aagaacaaga 840
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<210> 110
<211> 913
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accaaaaqaq tgaaaqaaac agtaatgcta tcctqtqatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqqcc tqaqtacaaq aaccqcacca tcactqacat qaacqataac 300
ccccqtattq tqatcctqqc tctqcqcctq tcqqacaqtq qcacctacac ctqtqttatt 360
caqaaqcctq ttttgaaaqq qqcttataaa ctqqaqcacc tqqcttccqt qaqqttaatq 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact gggtttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagettcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
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tcctcgggct gag
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<211> 912
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
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<222> (827)
<223> A, T, C, G, other or unknown
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cagetettgg tgeteactgg tettttttae ttetgtteag geateacece aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
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ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240

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ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
caqaagcctg ttttgaaagg ggcttataaa ctggagcacc tggcttctgt gaggttaatg 420
atcagagetg acticectgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgeggtag ttetetactg cetggeetge agacatgttg egaggtngaa aagaacaaga 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
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<211> 882
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gtgaaagaaa tggcagcact gtcctgtgat tacaacattt ctatcgatga actggcgaga 180
atgcgcatat actggcagaa ggaccaacag atggtgctga gcatcatctc tgggcaagtg 240
gaggtgtggc ctgagtacaa gaaccgcacc atcactgaca tgaacgataa cccccgtatt 300
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qacttccctg tccctaccat aaatgatctt ggaaatccat ctcctaatat cagaaggcta 480
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gaattaaatg ctaccaacac aacactgtcc caagatcctg aaaccaagct ctacatgatt 600
agcagtgaac tggatttcaa catgacaagc aatcacagct tcttgtgtct tgtcaagtat 660
ggagacttaa cagtgtcaca gaccttctac tggcaagaat ccaaaccaac cccttctgct 720
aatcagcacc tgacctggac cattattatc ccagtctcag catttgggat ttctgtgatc 780
attgcagtta tactaacatg cctgacctgc agaaatgctg caatacgcag acagagaagg 840
gagaatgaag tggaaatgca aagttgctct cagtctccat ag
<210> 113
<211> 906
<212> DNA
<213> Artificial Sequence
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      nucleotide sequence
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cagetettgg tgeteaetgg tettttttae ttetgtteag geateaeeee aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatccaggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatc 360
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ctaatttgct caacctctgg aggttttcca aggccccacc tctactggtt ggaaaatgga 540
qaaqaattaa atgctaccaa cacaacagtt tcccaagatc ctggaactga gctctacatg 600
attagcagtg aactggattt caatgtgaca aataaccaca gcatcgtgtg tctcatcaaa 660
tacggggagc tgtcggtgtc acagatcttc ccttggagca aacccaagca ggagcctccc 720
attgatcagc ttccattctg ggtcattatc ccagtaagtg gtgctttggt gctcactgcg 780
qtaqttctct actqcctqqc ctqcaqacat gttqcgagqt ggaaaagaac aagaaggaat 840
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
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caqaaqcctq ttttqaaagg ggcttataaa ctggagcacc tgacttccgt gaggttaatg 420
atcagagetg acttecetgt ecctaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
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aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
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<211> 912
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      nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctqacaaqcc ttcqqatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ecceptatty tyatectyge tetyegeety teggacayty geacetaeae etytyttatt 360
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cagaagectg ttttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420

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agaaggetaa titgeteaae etetggaggt titeeaagge eeeaceteta etggitggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
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cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
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accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtqatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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cccattgatc agcttccatt ctgggtcatt atcctagtaa gtggtgcttt ggtgctcact 780
gcggtagttc tctactgcct ggcctgcaga catgttgcga ggtggaaaag aacaagaagg 840
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<211> 903
<212> DNA
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      nucleotide sequence
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ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
eccegtattg tgatectgge tetgegeetg teggacagtg geacetaeae etgtgttatt 360
cagaagectg ttttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
atcagagetg acttecetgt ceetageata actgaeattg gaeateeege ceetaatgtg 480
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agcagtgaac tggatttcaa tgtgacaaat aaccacagca tcgtgtgtct catcaaatac 660
ggggagetgt eggtgteaca gatetteeet tggageaaae eeaageagga geeteeeatt 720
gatcagette cattetgggt cattatecea gtaagtggtg etttggtget caetgeggta 780
gttctctact gcctggcctg cagacatgtt gcgaggtgga aaagaacaag aaggaatgaa 840
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tqa
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     nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaageetg ttttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
atcagagetg actteeetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttagaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
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      nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
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ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagectg ttttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
atcagagetg actteeetgt cectaceata aatgatettg gaaateeate teetaatate 480
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agaaqgetaa tttgctcaac ctctggaggt tttccagage ctcgcctcgc ctggatggaa 540

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<223> Description of Artificial Sequence: Synthetic
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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aqaaqqctaa tttqctcaac ctctqqaqqt tttccaaqqc cccacctcta ctqqttqqaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaageetg atttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
atcagagetg acttecetgt ecetageata actgaeattg gaeateeege eectaatgtg 480
gatggagaag aactaaacgc cgtcaacacg acggttgacc aggatttgga cacggagctc 600
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tacagcgtca gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
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cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
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accaaaaqaq tqaaaqaaac aqtaatgcta tcctqtqatt acaacacatc cactgaaqaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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cagaageetg atttgaaagg ggettataaa etggageace tggetteegt gaggttaatg 420
atcagagetg acttecetgt cectageata actgaeattg gaeateeege cectaatgtg 480
gatggggaag aactaaacgc cgtcaacacg acggttgacc aggatttgga cacggagctc 600
tacagegtea geagtgaact ggattteaat gtgacaaata accacageat egtgtgtete 660
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actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
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caqaaqcctq ttttqaaaqq qqcttataaa ctqqaqcacc tqqcttccqt qaqqttaatg 420
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agaaggetaa tttgctcaac ctctggaggt tttccaagge cccacctcta ctggttggaa 540
aatqqaqaaq aattaaatqc taccaacaca acaqtttccc aaqatcctqq aactqaqctc 600
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tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660

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actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
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<211> 909
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaaa aaccgcacct tccccgacat cattaacaac 300
ctctccctta tgatcctggc actgcgcctg tcggacaagg gcacctacac ctgcgtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cctccgtgac actgtccatc 420
agagetgaet tecetgtete tageataaet gaeattggae atecegeece taatgtgaaa 480
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cccattgate agettecatt ctgggtcatt atcccagtaa gtggtgcttt ggtgctcact 780
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cagaagectg ttttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
atcagagetg acttecetgt cectageata actgaeattg gaeateeege cectaatgtg 480
gatggagaag aactaaacgc cgtcaacacg acggttgacc aggatttgga cacggagctc 600
tacagegtea geagtgaact ggattteaat gtgacaaata accacageat egtgtgtete 660
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actgcqqtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
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tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacaq atcttccctt qqaqcaaacc caaqcaqqaq 720
cctcccattq atcaqcttcc attctqqqtc attatcccaq taaqtqqtqc tttqqtqctc 780
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
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eccegtattg tgateetgge tetgegeetg teggacagtg geacetacae etgtgttatt 360
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tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacaq atcttccctt qqaqcaaacc caaqcaqqaq 720
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cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780

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accaaaaqag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
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aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
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cctcccattq atcagcttcc attctgggtc attatcccag taagtggtgc ttttggtgctc 780
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accaaaaqaq tqaaaqaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
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cagaagcctg atttgaaagg ggcttataaa ctggagcacc tggcttccgt gaggttaatg 420
atcagagetg acttecetgt ceetageata actgaeattg gaeateeege ceetaatgtg 480
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agaaggetaa tttgeteaae etetggaggt ttteeaagge eeeaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
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ccttctgcta atcagcacct gacctggacc attattatcc cagtctcagc attttgggatt 780
tetgtgatea ttgeagttat actaacatge etgaeetgea gaaatgetge aataegeaga 840
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accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtqatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacaagg gcacctacac ctgcgtggtt 360
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agagetgaet tecetgteee tageataaet gaeattggae atecegeeee taatgtgaaa 480
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ggagaagaac taaacgccgt caacacgacg gttgaccagg atttggacac ggagctctac 600
agcqtcaqca qtqaactqqa tttcaatqtq acaaataacc acagcatcqt gtgtctcatc 660
aaatacqqqq aqctqtcqqt qtcacaqatc ttcccttqqa qcaaacccaa qcagqaqcct 720
cccattqatc aqcttccatt ctqqqtcatt atcccaqtaa qtqqtqcttt qqtqctcact 780
gcggtagttc tctactgcct ggcctgcaga catgttgcga ggtggaaaag aacaagaagg 840
aatgaagaga cagtgggaac tgaaaggctg tcccctatct acttaggctc tgcgcaatcc 900
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tcgggctag
<210> 135
<211> 891
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 135
atgggtcaca caatgaagtg gggatcacta ccacccaagc gcccatgcct ctggctctct 60
cagetettqq tqctcaetqq tettttttae ttetqttcaq qeaccaeece aaaqaqtqtq 120
accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtgatt acaacacatc cactgaaqaa 180
ctgacaaqcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqgcc tqaqtacaaq aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcccg tcggacagtg gcacctacac ctgtgttatt 360
cagaagectg ttttgaaagg ggettataaa ctggageace tggetteegt gaggttaatg 420
atcagagetg acttecetgt ecctaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaac atgacaagca atcacagctt cttgtgtctt 660
gtcaagtatg gagacttaac agtgtcacag accttctact ggcaagaatc caaaccaacc 720
ccttctgcta atcagcacct gacctggacc attattatcc cagtctcagc attttgggatt 780
tetgtgatea ttgeagttat actaacatge etgacetgea gaaatgetge aataegeaga 840
cagagaaggg agaatgaagt ggaaatgcaa agttgctctc agtctccatg a
                                                                   891
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<211> 912
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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cagetettgg tgeteaetgg tettttttae ttetgtteag geateaecee aaagagtgtg 120
accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtqatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagcctg atttgaaagg ggcttataaa ctggagcacc tggcttccgt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accgcagcat cgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtqtcacaq atcttccctt qqaqcaaacc caaqcaqqaq 720
cctcccattq atcaqcttcc attctqqqtc attatcccaq taaqtqqtqc tttqqtqctc 780
actqcqqtaq ttctctactq cctqqcctqc aqacatqttq cqaqqtgqaa aagaacaaqa 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
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tcctcqqqct qa
<210> 137
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      nucleotide sequence
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accaaaaqaq tqaaaqaaac aqtaatgcta tcctqtqatt acaacacatc cactqaaqaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqqcc tqaqtacaaq aaccqcacca tcactqacat qaacqataac 300
eccegtattg tgatectgge tetgegeetg teggacagtg geacetaeae etgtgttatt 360
cagaagectg ttttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
atcagagetg acttecetgt ecctaceata aatgatettg gaaatecate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaac acgacaagca atcacagctt cttgtgtctt 660
qtcaaqtatq qaqacttaac aqtqtcacag accttctact qqcaaqaatc caaaccaacc 720
ccttctgcta atcagcacct gacctggacc attattatcc cagtctcagc attttgggatt 780
tetgtgatea ttgeagttat actaacatge etgaeetgea gaaatgetge aataegeaga 840
cagagaaggg agaatgaagt ggaaatgcaa agttgctctc agtctccatg a
                                                                  891
<210> 138
<211> 912
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<212> DNA

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<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 138
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cagetettgg tgeteactgg tettttttae ttetgtteag geateacece aaagagtgtg 120
accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtgatt acaacacatc cactgaagaa 180
ctgacaaqcc ttcggatcta ttggcaaaaq gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ecceptatty tyatectyge tetgegeety teggacaagy geacetaeae etgtgttatt 360
cagaagcctg atttgaaagg ggcttataaa ctggagcacc tggcttccgt gaggttaatg 420
atcagagetg acttemetgt contaccata aatgatettg gaaatemate tectaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acagtttccc aagatcctgg aactgagctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacg gggagctgtc ggtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattq atcaqcttcc attctgggtc attatcccag taagtggtgc tttggtgctc 780
actqcqqtaq ttctctactq cctgqcctqc aggcatqttq cgagqtggaa aagaacaaga 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
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tcctcgggct ga
<210> 139
<211> 891
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 139
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cagetettgg tgeteactgg tettttttae ttetgtteag geateaceee aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagcctg atttgaaagg ggcttataaa ctggagcacc tgacttccgt gaggttaatg 420
atcagagetg actteeetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggctaa tttgctcaac ctctggaggt tttccaaggc cccacctcta ctggttggaa 540
aatggaaaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatqatta qcaqtqaact qqatttcaac atgacaagca atcacagctt cttgtgtctt 660
gtcaagtatg gagacttaac agtgtcacag accttctact ggcaagaatc caaaccaacc 720
ccttctqcta atcaqcacct qacctqqacc attattatcc cagtctcagc atttgggatt 780
tctqtqatca ttqcaqttat actaacatqc ctqacctqca gaaatqctqc aatacqcaga 840
cagagaaggg agaatgaagt ggaaatgcaa agttgctctc agtctccatg a
<210> 140
<211> 910
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 140
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cagetettgg tgeteactgg tetttttae ttetgtteag geateacece aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aggtqtggcc tgaqtacaag aaccgcacca tcactgacat gaacgataac 300
ccccqtattq tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgcgtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cctccgtgac actgtccatc 420
agagetgaet tecetgteee tageataact gaeattggae atecegeece taatgtgaaa 480
aggataagat gctccgcctc tggaggtttt ccagagcctc gcctcgcctg gatggaagat 540
ggagaagaac taaacgccgt caacacgacg gttgaccagg atttggacac ggagctctac 600
agogtcagca gtgaactgga tttcaatgtg acaaataacc acagcatcgt gtgtctcatc 660
aaatacqqqq aqctqtcqqt qtcacagatc ttcccttgga gcaaacccaa gcaggagcct 720
cccattgatc agcttccatt ctgggtcatt atcccagtaa gtggtgcttt ggtgctcact 780
gcggtagttc tctactgcct ggcctgcaga catgttgcga ggtggaaaag aacaagaagg 840
aatgaagaga cagtgggaac tgaaaggctg tcccctatct acttaggctc tgcgcaatcc 900
                                                                  910
tcgggctgag
<210> 141
<211> 912
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 141
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cagetettgg tgeteactgg tettttttae ttetgtteag geateaceee aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagcctg atttgaaagg ggcttataaa ctggagcacc tgacttccgt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate teetaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatqqaqaaq aattaaatqc taccaacaca acactqtccc aaqatcctqa aaccaaqctc 600
tacatgatta gcagtgaact ggatttcaat gtgacaaata accacagcat cgtgtgtctc 660
atcaaatacq qqqaqctqtc qqtgtcacag atcttccctt ggagcaaacc caagcaggag 720
cctcccattg atcagcttcc attctgggtc attatcccag taagtggtgc ttttggtgctc 780
actgcggtag ttctctactg cctggcctgc agacatgttg cgaggtggaa aagaacaaga 840
aggaatgaag agacagtggg aactgaaagg ctgtccccta tctacttagg ctctgcgcaa 900
                                                                  912
tcctcgggct ga
<210> 142
<211> 882
<212> DNA
<213> Artificial Sequence
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<220>

## <223> Description of Artificial Sequence: Synthetic nucleotide sequence

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<400> 142
atgggtcaca caatgaagtg gggatcacta ccacccaagc gcccatgcct ctggctctct 60
cagetettgg tgeteaetgg tettttttae ttetgtteag geateaecee aaagagtgtg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acaacacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
qqaaaaqtqc aqqtqtqqcc tqaqtacaag aaccgcacca tcactgacat gaacgataac 300
ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
caqaaqcctq ttttqaaaqq qqcttataaa ctqqaqcacc tgacttccgt qaggttaatg 420
atcagagetg actteeetgt cectaceata aatgatettg gaaateeate tectaatate 480
agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
tacatqatta qcaqtqaact qqatttcaac atqacaagca atttgtgtct tgtcaagtat 660
qqaqacttaa caqtqtcaca qaccttctac tqqcaaqaat ccaaaccaac cccttctgct 720
aatcagcacc tgacctggac cattattatc ccagtctcag catttgggat ttctgtgatc 780
attgcagtta tactaacatg cctgacctgc agaaatgctg caatacgcag acagagaagg 840
gagaatgaag tggaaatgca aagttgctct cagtctccat ga
                                                                  882
<210> 143
<211> 867
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 143
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caqttettqq tqctqqctaq tettteteat ttetqtteaq qtqttateca cqtqactaaq 120
gaagtgaaag aagtggcaac gctgtcctgt ggtctcaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggggaag aaaatggtgc tgactatgat gtctggggac 240
atqaatatat qqcccqaqta caaqaaccqq accatetttq atateactaa taacetetee 300
attqtqattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctggag 360
tatgaaaaag atgctttcaa gcgagaacac ctggctgaag tgatgttatc cgtcaaagct 420
gactteecta cacctagtat atetgacttt gaaatteeac ettetaacat tagaaggata 480
atttgctcaa cctccggagg ttttcctgag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagcttcc caagatcctg gaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tqctqcctqa cccactqttt tqccccaaga tqcagagaga gaaggaggaa tgagagattg 840
agaagggaaa gtgcacgccc tgtatga
                                                                   867
<210> 144
<211> 868
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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atgggctaca cacggaggca gggaacatca ccatccaagt gtccgtacct caagttcttt 60
cagetettgg tgetggetag tettteteat ttetgtteag gtgttateea egtgaceaag 120
gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactccca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atqaatatat qqcccqaqta caaqaaccqq accatctttg atatcactaa taacctctcc 300
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tatgaaaaag acgctttcaa gcgagaacac ctggctgaag tgatgttatc cgtcaaagct 420
gacttcccta cacctagtat aactgacttt gaaattccac cttctaacat tagaaggata 480
atttgctcaa cctccggagg ttttcctgag cctcacctct tctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teceatectg ggeeattace ttaateteag caaatggaat ttttgtgata 780
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agaagggaaa gtgtatgccc tgtatgag
<210> 145
<211> 867
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
<400> 145
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cagetettgg tgetggetag tettteecae ttetgtteag gtgttateca egtgaceaag 120
aaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
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tatgaaaaag atgctttcaa gcgggaacac ctggctgaag tgatgttatc cgtcaaagct 420
gacttcccta cacctagtat atctgacttt gaaattccac cttctaacat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc gatcgcagtt ttgtgtgtct catcaagtat 660
qqacatttaa qaqtqaatca qaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teccatectg ggecattace etaateteag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgggagattg 840
agaagggaaa gtgtacgccc tgtatga
                                                                  867
<210> 146
<211> 868
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
<400> 146
atgagccaca cacagaggca gggaatatca ccatccaagt gtccatacct caatttcttt 60
cagetettgg tgetggetag tettteteat ttetgtteag gtgttateea egtgaceaag 120
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<400> 144

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caaactcqca tctactggca aaaqgagaag aaaatqqtgc tgactatgat qtctqggqac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctggag 360
tatqaaaaag acgctttcaa gcgggagcac ctagctgaag tgacgttatc agtcaaagct 420
qacttcccta cacctagtat aactgacttt gaaattccac cttctaacat tagaaggata 480
atttqctcaa cctctqqaqq ttttccaqaq ccccacctct tctggctgga aaatggaqaa 540
gaattaaatg ccatcagcac aacagtttcc caagatcctg aaactgagct ctatgctgtc 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacaa ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga ggagaaggaa tgagagattg 840
agaagggaaa gtgtacaccc tgtatgag
                                                                  868
<210> 147
<211> 867
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 147
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cagetettgg tgetggetgg tettteteat etetgtteag gtgttateea egtgaceaag 120
gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctggag 360
tatgaaaaag acgctttcaa gcgggaacac ctagctgaag tgacgttatc agtcaaagct 420
qacttcccta cacctaqtat atctqacttt gaaattccga cttctaatat tagaaqqata 480
atttqctcaa cctctqqaqq ttttccaqaq cctcacctct tctggctgga aaatqgaqaa 540
quattaeatq ccatcaecac aecaqtttcc caeqatcctq aeactqaqct ctatactqtt 600
agcagcaaac tggatttcaa tatgacagcc aatcacagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccagga tgcagagaga gaaggaggaa tgagagattg 840
agaagggaaa gtgtatgccc tgtatag
<210> 148
<211> 867
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 148
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cagetettgg tgetggettg tettteteat ttetgtteag gtgttateea egtgaceaag 120
gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
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qacttcccta cacctagtat atctgacttt gaaattccac cttctaacat tagaaggata 480
gaactaaatg ccatcaacac aacagcttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgt teccatectg ggecattace etaateteag taaatggaat ttttgtgata 780
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<210> 149
<211> 867
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<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<400> 149
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gaagtgaaag aagtggcaac gctgtcctgt ggtcccaatg tttccgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
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gactteecta cacctagtat atetgacttt gaaattecaa ettetaacat tagaaggata 480
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ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
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      nucleotide sequence
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aaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggggaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagtg caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgc tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctagctgaag tgacgttatc agtcaaagct 420
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gacttcccta cacctagtat atctgacttt gaaattccaa cttctaatat tagaaggata 480

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quattaaatq ccatcaacac aacaqcttcc caaqatcctg aaactqaqct ctatqctqtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
qataacctgc tcccatcctg qqccattacc ttaatctcag taaatqqaat ttttqtqata 780
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gaagtgaaag aagtggcaac actgtcctgt ggtctcaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
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attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
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gactteecta caectagtat atetgaettt gaaatteeae ettetaaeat tagaaggata 480
atttqctcaa cctctqqaqq ttttcctqaq cctcacctct cctqqctqqa aaatqqaqaa 540
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agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780
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<210> 152
<211> 867
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgagaacac ctagctgaag tgacgttatc agtcaaagct 420
gactteecta cacctagtat aactgacttt gaaatteeac ettetaacat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgagct ctatactgtt 600
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agcagcaaac tggatttcaa tatgacagcc aatcacagtt ttgtgtgtct catcaagtat 660

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ggacatttaa gagtgaatca gacettcaac tggaatacac ccaagcaaga gcattttect 720
gataacctgc tcccatcctg ggccattacc ttaatctcag caaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
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<210> 153
<211> 901
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
<220>
<221> modified base
<222> (893)..(894)
<223> A, T, C, G, other or unknown
<400> 153
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagca caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgatgttatc cgtcaaagct 420
gacttcccta cacctagtat atctgacttt gaaattccac cttctaacat tagaaggata 480
atttgctcaa cctccggagg ttttcctgag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatactggt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
qgacatttaa gaqtgaatca gaccttcagc tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teccatectg ggccattacc etaateteag caaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgagaccctg 840
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      nucleotide sequence
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gaagtgaaag aagtggcaac gctgtcctgt ggtctcaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagca caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctagctgaag tgacgttatc agtcaaagct 420
gacttcccta cacctagtat aactgacttt gaaattccac cttctaacat tagaaggata 480
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gaattaaacg ccatcaacac aacagcttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacagcc aatcacagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga ggagaaggaa tgagacactg 840
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<210> 155
<211> 867
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     nucleotide sequence
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg ttcctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
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attgtgatte tggetetgeg cecatetgae gagggeacat aegggtgtgt tgttetggag 360
tatgaaaaag acgctttcaa gcgagaacac ctggctgaag tgatgttatc cgtcaaagct 420
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gaattaaatg ccatcaacac aacagcttcc caagatcctg aaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag caaatggaat ttttgtgata 780
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<210> 156
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gaaqtgaaag aggtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggataag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccag accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
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agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaggtat 660

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<222> (599)
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atqaatatat qqcccqaqta caaqaaccqq accatctttq atatcactaa taacctctcc 300
attqtqattc tqqctctqcq cccatctqac gaqqqcacat acqagtqtqt tqttctqaag 360.
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gacttcccta cacctagtat atctgacttt gaaattccac cttctaacat tagaaggata 480
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gaattaaatg ccatcagcac aacagtttcc caagatcctg aaactgagct ctatgctgnt 600
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gactteceta caectagtat atetgaettt gaaattecae ettetaaeat tagaaggata 480
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atttgeteaa eetetggagg tttteetgag eeteacetet eetggetgga aaatggagaa 540

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gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
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gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780
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gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
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ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720

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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgctga agagctggca 180
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agcaqcaaac tggatttcaa tatgacaact aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teceatectg ggccattace ctaateteag taaatggaat ttttgtgata 780
tgctgcctga cccactgttt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
                                                               867
agaagggaaa gtgtatgccc tgtatga
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gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780

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<210> 163
<211> 867
<212> DNA
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<220>
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cagetettqq tqctqqctqq tetttetcae ttetqttcaq qtqttateca cqtqaccaaq 120
gaagtgaaag aagtggcaac gctgtcctgt ggtctcaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgatgttatc cgtcaaagct 420
gactteecta cacctagtat aactgacttt gaaatteeac ettetaacat tagaaggata 480
atttgctcaa cctctggagg ttttcctgag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgaget ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
qqacatttaa qaqtqaatca qaccttcaac tqqaatacac ccaaqcaaqa qcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag caaatggaat ttttgtgata 780
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agaagggaaa gtgtatgccc tgtatga
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<213> Artificial Sequence
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      nucleotide sequence
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qaaqtqaaaq aaqtqqcaac actqtcctqt gqtcacaatg tttctgatga agaqctgqca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atqaatatat qqcccqaqta caaqaaccqq accatctttq atatcactaa taacctctcc 300
attgtgatte tggetetgeg eccatetgae gagggeaeat aegagtgtgt tgttetgaag 360
tatgaaaaag atgettteaa gegagaacae etggetgaag tgaegttate agteaaaget 420
gactteecta cacctagtat atetgacttt gaaatteeac ettetaacat tagaaggata 480
atttgctcaa cctctggagg ttttcctgag cctcacctct cctggctgga aaatggggaa 540
quattaaatq ccatcaacac aacaqtttcc caagatcctg gaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teceatecta ggeeattace ttaateteag caaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccgaga tgcagagaga gaaggaggaa tgagagattg 840
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<212> DNA
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<220>
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cagetettgg tgetggetgg tettteteat etetgtteag gtgttateea egtgaetaag 120
gaagtgaaag aagtggcaac gctgccctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgaqta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag atgctttcaa gcgggaacac ctggctgaag tgatgttatc cgtcaaagct 420
gactteecta cacctagtat aactgacttt gaaatteeac ettetaacat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct tctggctgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacaact tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teccatectg ggccattacc ttaateteag taaatggaat ttttgtgata 780
tgctgcctqa cctactqctt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcqca tctactqqca aaaqqaqaaq aaaatqqtqc tqactatqat qtctqqqqac 240
atqaatatat qqcccqaqta caaqaaccqq accatctttq atatcactaa taacctctcc 300
attqtqattc tqqctctqcq cccatctqac qaqqqcacat acqaqtqtqt tqctctqaaq 360
tatgaaaaag atgctttcaa gcaggaacac ctggctgaag tgacgttatc agtcaaagct 420
gacttcccta cacctagtat atctgacttt gaaattccac cttctaacat tagaaggata 480
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacagcc aaccacagct tcatgtgtct catcaagtat 660
qqacatttaa qaqtqaatca qaccttcaac tqqaatacac ccaaqcaaqa qcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
agaagggaaa gtgtatgccc tgtatga
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<210> 167
<211> 867
<212> DNA
<213> Artificial Sequence
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<220>
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cctatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaagg acgctttcaa gcgggaacac ctggctgaag tgacgttatc agtcaaagct 420
qacttcccta cacctaqtat atctqacttt gaaattccaa cttctaacat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct tctggctgga aaatggggaa 540
gaattaaatg ccatcaacac aacagcttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctac teccatectg ggecattace ttaateteag taaatggaat tttegtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
agaagggaaa gtgtacgccc tgtatga
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      nucleotide séquence
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag atgctttcaa gcggaaacac ctggctgaag tgatgttatc cgtcaaagct 420
gactteecta cacctagtat atetgacttt gaaatteeaa ettetaatat tagaaggata 480
atttgctcaa cctctggagg ttttcctgag cctcacctct tctggctgga aaatggagaa 540
quattaaatq ccatcaacac aacaqcttcc caaqatcctq aaactqaqct ctatactqtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
qqacatttaa qaqtqaatca qaccttcaac tqqaatacac ccaagcaaqa gcattttcct 720
aataacctqc tcccatcctq qqccattacc ttaatctcag taaatqgaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga ggagaaggaa tgagacactg 840
agaagggaaa gtgtacaccc tgtatga
<210> 169
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<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic
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## nucleotide sequence

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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagca caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgacgttatc agtcaaagct 420
qacttcccta cacctagtat aactgacttt gaaattccaa cttctaatat tagaaggata 480
atttqctcaa cctctqqaqq ttttccaqaq cctcacctct cctqqctqqa aaatqqaqaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgaget ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
ggacatttaa gaqtgaatca qaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctqc tcccatcctq qqccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagggaga gaaggaggaa tgagagattg 840
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gcctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgagg 360
tatgaaaaag atgctttcaa gcgggaacac ctggctgaag tgacgttatc agtcaaagct 420
gacttcccta cacctagtat atctgacttt gaaattccaa cttctaatat tagaaggata 480
atttgctcaa cctccggagg ttttcctgag cctcacctct cctggctgga aaatggggaa 540
gaattaaatg ccatcaacac aacagcttcc caagatcctg aaactgagct ctatactgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag caaatggaat ttttgtgata 780
tgctgcctga cccactgctt cgccccaaga tgcagagaga gaaagagcaa tgagagactg 840
agaagggaaa gtgtacgccc tgtatag
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<211> 867
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<213> Artificial Sequence
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<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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gaagtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tccactggca aaaggagaag aaaatggtgc tgactatgat gtctgggggc 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
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gacttcccta cacctagtat atctgacttt gaaattccaa cttctaatat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct cctggctgga aaatggagaa 540
gaattaaatg ccatcagcac aacagtttcc caagatcctg gaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aatcgcagtt ttgtgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacaa ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ctaatctcag taaatggaat ttttgtgata 780
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gaaqtgaaag aagtggcaac actgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctggag 360
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gaattaaatg ccatcaacac aacagtttcc caagatcctg gaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacac ccaagcaaga gcattttcct 720
gataacctgc teccatectg ggecattace etaateteag taaatggaat ttttgtgata 780
tgctgcctgg cctactgctt tgccccaaga tgcagaggga gaaggaggaa tgagagattg 840
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agaagggaaa gtgtacgccc tgtatga
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<211> 867
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<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence
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cagetettgg tgetggettg tettteteae ttetgtteag gtgttateca egtgaetaag 120
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gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180

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caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgattc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag atgettteaa gegagaacae etggetgaag tgatgttate egteaaaget 420
qacttcccta cacctagtat atctgacttt gaaattccac cttctaacat tagaaggata 480
qaactaaatg ccatcagcac aacagtttcc caagatcctg gaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacaa ccaagcaaga gcattttcct 720
gataacetge teccateetg ggecattace etaateteag taaagggaat ttitgtgata 780
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Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
            20
Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
                        55
Arg Ile Tyr Trp Arg Lys Asp Ser Lys Met Xaa Leu Ala Ile Leu Pro
65
                    70
                                        75
Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp
Met Asn Asp Asn Leu Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
           100
                                                  110
Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala
Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp
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Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile

145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Leu Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His
260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 175

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 175

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1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 155 160 145 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 300 290 295 <210> 176 <211> 310 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <220> <221> MOD RES <222> (310) <223> Variable amino acid <400> 176

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15

Val Pro Ser Leu Ser Xaa

300

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Arg Ala Glu

295

305 310

<210> 177 <211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 177

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1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Leu Val Ile Ile Pro Val Ser Gly 250 245 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 178 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 178 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 10 Leu Trp Leu Pro Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 70 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 140 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu

170

165

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 235 230 Pro Pro Ile Asp Gln Leu Pro Phe Arg Val Ile Ile Pro Val Ser Gly 250 245 Ala Leu Val Leu Thr Ala Ile Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 <210> 179 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 179 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 3.0 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 70 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala

115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295

<210> 180

<211> 302

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 180

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Pro Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 135 Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys 150 155 Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe 200 Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 210 215 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro 235 230 Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala 250 245 Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 280 Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 <210> 181 <211> 303 <212> PRT <213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic

<220>

<400> 181

peptide

Met 1	Gly	His	Thr	Met 5	Lys	Trp	Gly	Ser	Leu 10	Pro	Pro	Lys	Arg	Pro 15	Cys
Leu	Trp	Leu	Ser 20	Gln	Leu	Leu	Val	Leu 25	Thr	Gly	Leu	Phe	Tyr 30	Phe	Cys
Ser	Gly	Ile 35	Thr	Pro	Lys	Ser	Val 40	Thr	Lys	Arg	Val	Lys 45	Glu	Thr	Val
Met	Leu 50	Ser	Cys	Asp	Tyr	Asn 55	Thr	Ser	Thr	Glu	Glu 60	Leu	Thr	Ser	Leu
Arg 65	Ile	Tyr	Trp	Gln	Lys 70	Asp	Ser	Lys	Met	Val 75	Leu	Ala	Ile	Leu	Pro 80
Gly	Lys	Val	Gln	Val 85	Trp	Pro	Glu	Tyr	Lys 90	Asn	Arg	Thr	Ile	Thr 95	Asp
Met	Asn	Asp	Asn 100	Pro	Arg	Ile	Val	Ile 105	Leu	Ala	Leu	Arg	Leu 110	Ser	Asp
Lys	Gly	Thr 115	Tyr	Thr	Cys	Val	Ile 120	Gln	Lys	Pro	Val	Leu 125	Lys	Gly	Ala
Tyr	Lys 130	Leu	Glu	His	Leu	Ala 135	Ser	Val	Arg	Leu	Met 140	Ile	Arg	Ala	Asp
Phe 145	Pro	Val	Pro	Thr	Ile 150	Asn	Asp	Leu	Gly	Asn 155	Pro	Ser	Pro	Asn	Ile 160
Arg	Arg	Leu	Ile	Cys 165	Ser	Thr	Ser	Gly	Gly 170		Pro	Arg	Pro	His 175	Leu
Tyr	Trp	Leu	Glu 180	Asn	Gly	Glu	Glu	Leu 185	Asn	Ala	Thr	Asn	Thr 190	Thr	Val
Ser	Gln	Asp 195	Pro	Gly	Thr	Glu	Leu 200	Tyr	Met	Ile	Ser	Ser 205	Glu	Leu	Asp
Phe	Asn 210	Val	Thr	Asn	Asn	His 215	Ser	Ile	Val	Cys	Leu 220	Ile	Lys	Tyr	Gly
Glu 225	Leu	Ser	Val	Ser	Gln 230	Ile	Phe	Pro	Trp	Ser 235	Lys	Pro	Lys	Gln	Glu 240
Pro	Pro	Ile	Asp	Gln 245	Leu	Pro	Phe	Trp	Val 250	Ile	Ile	Pro	Val	Ser 255	Gly
Ala	Leu	Val	Leu 260	Thr	Ala	Val	Val	Leu 265	Tyr	Cys	Leu	Ala	Cys 270	Arg	His
Val	Ala	Arg 275	Trp	Lys	Arg	Thr	Arg 280	Arg	Asn	Glu	Glu	Thr 285	Val	Gly	Thr
Glu	Arg	Leu	Ser	Pro	Ile	Tyr	Leu	Gly	Ser	Ala	Gln	Ser	Ser	Gly	

<211> 296 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 182 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205 Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly 210 Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 230 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Pro Val Ser

<210> 182

245 250 255

Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 270

Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu 275 280 285

Met Gln Ser Cys Ser Gln Ser Pro 290 295

<210> 183

<211> 296

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 183

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp
85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 190 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly 210 215 220

Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 225 230 235 240

Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser 245 250 255

Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 270

Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Lys 275 280 285

Met Gln Ser Cys Ser Gln Ser Pro 290 295

<210> 184

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 184

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp
85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp

Lys Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 150 155 Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu 170 165 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 195 200 Phe Asn Ala Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 220 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Val Pro Val Ser Gly 245 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arq 275 <210> 185 <211> 303 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 185 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 70 75

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp

85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly
210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 186

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 186

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Pro Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Ala Cys Leu Ile Lys Tyr Gly 210 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295

<210> 187

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 187

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly
210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270 Gly Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 188 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 188 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 180 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 200

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly

210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 189

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 189

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Gly 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly <210> 190 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <220> <221> MOD RES <222> (276) <223> Variable amino acid <400> 190 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu

65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Xaa Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 300

<210> 191

<211> 293

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 191

Met Gly His Thr Leu Arg Pro Gly Thr Pro Leu Pro Arg Cys Leu His 1 5 10 15

Leu Lys Leu Cys Leu Leu Leu Ala Leu Ala Gly Leu His Phe Ser Ser 20 25 30

Gly Ile Ser Gln Val Thr Lys Ser Val Lys Glu Met Ala Ala Leu Ser

Cys Asp Tyr Asn Ile Ser Ile Asp Glu Leu Ala Arg Met Arg Ile Tyr 50 55 60

Trp Gln Lys Asp Gln Gln Met Val Leu Ser Ile Ile Ser Gly Gln Val
65 70 75 80

Glu Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp
85 90 95

Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr 100 105 110

Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Pro 115 120 125

Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp Phe Pro Val 130 135 140

Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg Arg Leu 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser Gln Asp 180 185 190

Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe Asn Met 195 200 205

Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr 210 215 220

Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro Ser Ala 225 230 235 240

Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala Phe Gly
245 250 255

Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys Arg Asn 260 265 270

Ala Ala Ile Arg Arg Gln Arg Glu Asn Glu Val Glu Met Gln Ser 275 280 285

Cys Ser Gln Ser Pro 290

<210> 192

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<211> 301
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
<400> 192
Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
                                 25
Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
                         55
Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
 65
                     70
Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp
Met Asn Asp Asn Pro Arg Ile Val Ile Gln Ala Leu Arg Leu Ser Asp
                                105
Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala
        115
Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp
Phe Pro Val Pro Thr Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg Arg
145
                    150
                                                             160
Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr Trp
Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val Ser Gln
                                185
Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe Asn
        195
                            200
Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu
                        215
Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro
```

250

Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu

235

230

245

225

Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala 265 Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg 280 Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 193 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 193 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 30 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 40 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 165 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 185

Ser Gln Asp Pro Glu Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp

195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 194

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 194

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 220 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 300 <210> 195 <211> 302 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 195 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile

150

145

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 135 Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys 155 150 Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu Ala 170 Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp 185 Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe 200 Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 215 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Leu Val Ser Gly Ala 255 Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val 265 Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 280 Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 290 <210> 196 <211> 300 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 196 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp

85

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys

20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 70 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 140 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 150 155 Lys Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu 170 165 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile 230 235 Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val 245 250 Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg 265 Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu 275 280 Ser Pro Ile Tyr Leu Gly Ser Ala Gln Pro Ser Gly 295 290

<210> 197

<211> 303

<212> PRT

## <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic <400> 197 Met Gly His Thr Met Glu Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 185 Ser Gln Asp Pro Glu Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly

250

235

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His

265

230

245

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 300 290 295 <210> 198 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 198 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 30 20 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 40 Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 110 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu 165 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp

205

200

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 <210> 199 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 199 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile

145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 190

Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 200

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 200

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 120 125 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 160 155 145 150 Lys Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 195 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 275 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 300 <210> 201 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 201 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 5

30

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys

25

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 40 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 150 145 Lys Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 200 195 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 235 225 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 275 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 300

<210> 202

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 202

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Ser Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly
210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr

275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 203

<211> 302

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 203

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Phe Pro Asp 85 90 95

Ile Ile Asn Asn Leu Ser Leu Met Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 115 120 125

Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 130 135 140

Pro Val Ser Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys 145 150 155 160

Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala 165 170 175

Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp 180 185 190

Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe 195 200 205

Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 210 215 220 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val 265 Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 280 Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 <210> 204 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 204 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 10 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val

155

160

150

165 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 195 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 300 <210> 205 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 205 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 5 15 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Asp Leu Phe Tyr Phe Cys 20 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp

Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu

100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 206

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 206

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 100 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Ala Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 300

<210> 207

<211> 300

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

## peptide

<400> Met Gl		Thr	Met 5	Lys	Trp	Gly	Ser	Leu 10	Pro	Pro	Lys	Arg	Pro 15	Cys
Leu Tr	p Leu	Ser 20	Gln	Leu	Leu	Val	Leu 25	Thr	Gly	Leu	Phe	Tyr 30	Phe	Cys
Ser Gl	y Ile . 35	Thr	Pro	Lys	Ser	Val 40	Thr	Lys	Arg	Val	Lys 45	Glu	Thr	Val
Met Le	u Ser 0	Cys	Asp	Tyr	Ser 55	Thr	Ser	Thr	Glu	Glu 60	Leu	Thr	Ser	Leu
Arg Il 65	e Tyr	Trp	Gln	Lys 70	Asp	Ser	Lys	Met	Val 75	Leu	Ala	Ile	Leu	Pro 80
Gly Ly	s Val	Gln	Val 85	Trp	Pro	Glu	Tyr	Lys 90	Asn	Arg	Thr	Ile	Thr 95	Asp
Met As	n Asp	Asn 100	Pro	Arg	Ile	Val	Ile 105	Leu	Ala	Leu	Arg	Leu 110	Ser	Asp
Ser Gl	y Thr 115	_	Thr	Cys	Val	Ile 120	Gln	Lys	Pro	Val	Leu 125	Lys	Gly	Ala
Tyr Ly		Glu	His	Leu	Ala 135	Ser	Val	Arg	Leu	Met 140	Ile	Arg	Ala	Asp
Phe Pr 145	o Val	Pro	Thr	Ile 150	Asn	Asp	Leu	Gly	Asn 155	Pro	Ser	Pro	Asn	Ile 160
Arg Ar	g Leu	Ile	Cys 165	Ser	Gly	Phe	Pro	Arg 170	Pro	His	Leu	Tyr	Trp 175	Leu
Glu As	n Gly	Glu 180	Glu	Leu	Asn	Ala	Thr 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro Gl	y Thr 195		Leu	Tyr	Met	Ile 200	Ser	Ser	Glu	Leu	Asp 205	Phe	Asn	Val
Thr As		His	Ser	Ile	Val 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	Glu	Leu	Ser
Val Se 225	r Gln	Ile	Phe	Pro 230	Trp	Ser	Lys	Pro	Lys 235	Gln	Glu	Pro	Pro	Ile 240
Asp Gl	n Leu	Pro	Phe 245	Trp	Val	Ile	Ile	Pro 250	Val	Ser	Gly	Ala	Leu 255	Val
Leu Th	r Ala	Val 260	Val	Leu	Tyr	Cys	Leu 265	Ala	Cys	Arg	His	Val 270	Ala	Arg
Trp Ly	s Arg 275		Arg	Arg	Asn	Glu 280	Glu	Thr	Val	Gly	Thr 285	Glu	Arg	Leu

Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 208 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 208 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 10 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 190 Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu

225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 209

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 209

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 220 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 255 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 300 <210> 210 <211> 304 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 210 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 5 15 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp

105

110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 145 150 Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 185 Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 195 200 Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly 215 Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 225 230 235 240 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser 250 Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Gly Lys 280 275 Cys Lys Val Leu Ser Val Ser Ile Gly Thr Lys Leu Lys Phe Asn Arg 290 295 300 <210> 211 <211> 303 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 211 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 5 15 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 40

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu

50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 70 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 110 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Pro Asp Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 145 155 Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 200 Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 240 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly

<210> 212

<211> 296

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

295

	<400	)> 23	12													
	Met 1	Gly	His	Thr	Met 5	Lys	Trp	Gly	Ser	Leu 10	Pro	Pro	Lys	Arg	Pro 15	Cys
	Leu	Trp	Leu	Ser 20	Gln	Leu	Leu	Val	Leu 25	Thr	Gly	Leu	Phe	Tyr 30	Phe	Cys
	Ser	Gly	Ile 35	Thr	Pro	Lys	Ser	Val 40	Thr	Lys	Arg	Val	Lys 45	Glu	Thr	Val
	Met	Leu 50	Ser	Cys	Asp	Tyr	Ser 55	Thr	Ser	Thr	Glu	Glu 60	Leu	Thr	Ser	Leu
	Arg 65	Ile	Tyr	Trp	Gln	Lys 70	Asp	Ser	Lys	Met	Val 75	Leu	Ala	Ile	Leu	Pro 80
	Gly	Lys	Val	Gln	Val 85	Trp	Pro	Glu	Tyr	Lys 90	Asn	Arg	Thr	Ile	Thr 95	Asp
	Met	Asn	Asp	Asn 100	Pro	Arg	Ile	Val	Ile 105	Leu	Ala	Leu	Arg	Leu 110	Ser	Asp
	Ser	Gly	Thr 115	Tyr	Thr	Cys	Val	Ile 120	Gln	Lys	Pro	Val	Leu 125	Lys	Gly	Ala
	Tyr	Lys 130	Leu	Glu	His	Leu	Thr 135	Ser	Val	Arg	Leu	Met 140	Ile	Arg	Ala	Asp
	Phe 145	Pro	Val	Pro	Thr	Ile 150	Asn	Asp	Leu	Gly	Asn 155	Pro	Ser	Pro	Asņ	Ile 160
	Arg	Arg	Leu	Ile	Cys 165	Ser	Thr	Ser	Gly	Gly 170	Phe	Pro	Arg	Pro	His 175	Leu
	Tyr	Trp	Leu	Glu 180	Asn	Gly	Glu	Glu	Leu 185	Asn	Ala	Thr	Asn	Thr 190	Thr	Leu
	Ser	Gln	Asp 195	Pro	Glu	Thr	Lys	Leu 200	Tyr	Met	Ile	Ser	Ser 205	Glu	Leu	Asp
	Phe	Asn 210	Met	Thr	Ser	Asn	His 215	Ser	Phe	Leu	Cys	Leu 220	Val	Lys	Tyr	Gly
	Asp 225	Leu	Thr	Val	Ser	Gln 230	Ser	Phe	Tyr	Trp	Gln 235	Glu	Ser	Lys	Pro	Thr 240
	Pro	Ser	Ala	Asn	Gln 245	His	Leu	Thr	Trp	Thr 250	Ile	Ile	Ile	Pro	Val 255	Ser
,	Ala	Phe	Gly	Ile 260	Ser	Val	Ile	Ile	Ala 265	Val	Ile	Leu	Thr	Cys 270	Leu	Thr
	Cys	Arg	Asn 275	Ala	Ala	Ile	Arg	Arg 280	Gln	Arg	Arg	Glu	Asn 285	Glu	Val	Glu
	Met	Gln 290	Ser	Cys	Ser	Gln	Ser 295	Pro						•		

<211> 302 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 213 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 60 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 130 140 Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala 170 Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp 180 Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe 200 Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 215 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro 225 235 240

<210> 213

Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala 245 250 255

Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val
260 265 270

Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 275 . 280 285

Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 214

<211> 296

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 214

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Thr Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Pro Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu

180 185 190

Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly
210 215 220

Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 225 230 235 240

Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser 245 250 255

Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr
260 265 270

Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu 275 280 285

Met Gln Ser Cys Ser Gln Ser Pro 290 295

<210> 215

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 215

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 155 145 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Val Thr Asn Asn Arg Ser Ile Val Cys Leu Ile Lys Tyr Gly 215 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 275 Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 300 <210> 216 <211> 296 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 216 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 140 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 Arq Arq Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Thr Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 225 230 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Pro Val Ser 250 Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 270 265 Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu 280 285 275 Met Gln Ser Cys Ser Gln Ser Pro 290 295 <210> 217 <211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 217

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Lys Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 290 295 300

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<211> 296
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     peptide
<400> 218
Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp
                                     90
Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
            100
                                105
Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala
                            120
Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp
    130
Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile
Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu
                                    170
Tyr Trp Leu Glu Asn Gly Lys Glu Leu Asn Ala Thr Asn Thr Thr Leu
                                                    190
            180
Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp
                            200
Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly
    210
                                            220
Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr
                    230
225
Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Pro Val Ser
                245
                                    250
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<210> 218

Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 270

Cys Arg Asn Ala Ala Ile Arg Gln Arg Glu Asn Glu Val Glu
275 280 285

Met Gln Ser Cys Ser Gln Ser Pro 290 295

<210> 219

<211> 302

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 219

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
50 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp
100 105 110

Ser Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 115 120 125

Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 130 135 140

Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys
145 150 155 160

Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala 165 170 175

Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Asp 180 185 190

Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu 215 220 Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro 225 230 235 Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala 250 Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val 260 265 Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 280 Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 220 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 220 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Arg Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45 Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp

Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe

130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 190

Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His
260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 221

<211> 293

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 221

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys
1 5 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Met Thr Ser Asn Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr 215 Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro Ser Ala 225 230 Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala Phe Gly 250 Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys Arg Asn 260 Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu Met Gln Ser 280 285 Cys Ser Gln Ser Pro 290 <210> 222 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 222 Met Ser His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr

Leu Lys Phe Phe Gln Phe Leu Val Leu Ala Ser Leu Ser His Phe Cys 25 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 Tyr Trp Gln Lys Gly Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 185 Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Ala Arg Pro Val 275

<210> 223

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 223

Met Gly Tyr Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Pro Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Arg Phe Ala Pro Arg Cys Arg 260 265 270

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val

275 280 285

<210> 224

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 224

Met Gly Tyr Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr

1 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Lys Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asp Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Gly Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 285 <210> 225 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 225 Met Ser His Thr Gln Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly

190

185

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro 235 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Glu Ser Val His Pro Val 280 285 275 <210> 226 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 226 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 10 Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Leu Cys 20 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile

145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Gly Cys Arg 260 265 270

Glu Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val 275 280 285

<210> 227

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 227

Met Ser His Ile Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

115 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met 170 Glu Asp Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 180 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asp Asn Leu Phe Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 285 <210> 228 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide Met Ser His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys Ser Gly Val Ile His Met Thr Lys Glu Val Lys Glu Val Ala Thr Leu 40 Ser Cys Gly Pro Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg

70 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu Glu Asn Gly Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Glu Ser Val Cys Pro Val 280 <210> 229 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 229 Met Ser His Thr Arg Arg Gln Gly Ile Ser Ser Ser Lys Cys Pro Tyr 10

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys

Ser Gly Val Ile His Val Thr Lys Lys Val Lys Glu Val Ala Thr Leu 35 40 45

20

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Gly Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Cys Lys Asn Arg Thr Ile Phe Asp Ile Thr
85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Ala Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 230

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223>	Description	of	Artificial	Sequence:	Synthetic
	peptide				

	0> 23 Gly		Thr	Arg 5	Arg	Gln	Gly	Thr	Ser 10	Pro	Ser	Glu	Cys	Pro 15	Tyr
Leu	Lys	Phe	Phe 20	Gln	Leu	Leu	Val	Leu 25	Ala	Gly	Leu	Ser	His 30	Phe	Cys
Ser	Gly	Val 35	Ile	His	Met	Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser	Cys 50	Gly	Leu	Asn	Val	Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
His 65	Trp	Gln	Lys	Glu	Lys 70	Lys	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met	Asn	Ile	Trp	Pro 85	Glu	Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn	Asn	Leu	Ser 100	Ile	Val	Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr	Tyr	Glu 115	Cys	Val	Val	Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu	His 130	Leu	Ala	Glu	Val	Met 135	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro 145	Ser	Ile	Ser	Asp	Phe 150	Glu	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile	Cys	Ser	Thr	Ser 165	Gly	Gly	Phe	Pro	Glu 170	Pro	His	Leu	Ser	Trp 175	Leu
Glu	Asn	Gly	Glu 180	Glu	Leu	Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro	Glu	Thr 195	Gly	Leu	Tyr	Thr	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr	Thr 210	Asn	His	Ser	Phe	Met 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val 225	Asn	Gln	Thr	Phe	Asn 230	Trp	Asn	Thr	Pro	Lys 235	Gln	Glu	His	Phe	Pro 240
Asp	Asn	Leu	Leu	Pro 245	Ser	Trp	Ala	Ile	Thr 250	Leu	Ile	Ser	Val	Asn 255	Gly
Ile	Phe	Val	Ile 260	Cys	Cys	Leu	Thr	Tyr 265	Cys	Phe	Ala	Pro	Arg 270	Cys	Arg
Glu	Arg	Arg 275	Arg	Asn	Glu	Arg	Leu 280	Arg	Arg	Glu	Ser	Val 285	Arg	Pro	Val

<211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 231 Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 15 5 Leu Asn Phe Phe Arg Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 235 240 225 230

<210> 231

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 <210> 232 <211> 300 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <220> <221> MOD RES <222> (298) <223> Variable amino acid <400> 232 Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 5 Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys 25 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu His Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 155 145 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu

170

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp Pro Glu Thr Glu Leu Tyr Thr Gly Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Ser Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 275 Trp Gly Thr Lys Leu Lys Phe Lys Pro Xaa Ile Ser 295 290 <210> 233 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 233 Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 5 Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys 20 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu His Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

110

105

100

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 Thr Ala Asn His Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 235 225 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 275 285 <210> 234 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 234 Met Gly Tyr Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys 20 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Pro Val Glu Glu Leu Ala Gln Thr Arg Ile

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Gly Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Leu Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270

Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val His Pro Val 275 280 285

<210> 235

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

65

<223> Description of Artificial Sequence: Synthetic peptide

<400> 235

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile Tyr Trp Gln Lys Asp Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Gln Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Gln 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met 170 Glu Asp Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp 185 180 Pro Gly Thr Glu Leu Cys Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Arg Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Lys Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Gly Arg 260 Glu Arg Lys Ser Asn Gly Arg Leu Arg Arg Glu Ser Val His Pro Val 280 275 285

<210> 236

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

## peptide

<220> <221> MOD_RES <222> (200) <223> Variable amino acid															
	)> 23 Gly		Thr	Arg 5	Arg	Gln	Gly	Thr	Ser 10	Pro	Ser	Lys	Cys	Pro 15	Tyr
Leu	Lys	Phe	Phe 20	Gln	Leu	Leu	Val	Leu 25	Ala	Gly	Leu	Ser	His 30	Phe	Cys
Ser	Gly	Val 35	Ile	His	Val	Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser	Cys 50	Gly	His	Asn	Val	Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
His 65	Trp	Gln	Lys	Glu	Lys 70	Lys	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met	Asn	Ile	Trp	Pro 85	Glu	Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn	Asn	Leu	Ser 100	Ile	Val	Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr	Tyr	Glu 115	Cys	Val	Val	Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu	His 130	Leu	Ala	Glu	Val	Met 135	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro 145	Ser	Ile	Ser	Asp	Phe 150	Glu	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile	Cys	Ser	Thr	Ser 165	Gly	Gly	Phe	Pro	Glu 170	Pro	His	Leu	Phe	Trp 175	Leu
Glu	Asn	Gly	Glu 180	Glu	Leu	Asn	Ala	Ile 185		Thr	Thr	Val	Ser 190	Gln	Asp
Pro	Glu	Thr 195	Glu	Leu	Tyr	Ala	Xaa 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr	Thr 210	Asn	His	Ser	Phe	Met 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val 225	Asn	Gln	Thr	Phe	Asn 230	Trp	Asn	Thr	Pro	Lys 235	Gln	Glu	His	Phe	Pro 240
Asp	Asn	Leu	Leu	Pro 245	Ser	Trp	Ala	Ile	Thr 250	Leu	Ile	Ser	Val	Asn 255	Gly
Ile	Phe	Val	Ile	Cys	Cys	Pro	Thr	Tyr	Cys	Phe	Ala	Pro	Arg	Cys	Arg

260 265 270

Glu Arg Arg Arg Asn Glu Arg Leu Arg Glu Ser Val Cys Pro Val
275 280 285

<210> 237

<211> 287

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 237

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile Tyr Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Ile Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg Glu 115 120 125

His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr Pro 130 135 140

Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile Ile 145 150 155 160

Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu Glu 165 170 175

Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp Pro 180 185 190

Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met Thr 195 200 205

Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg Val 210 215 220

225 230 235 Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly Ile 250 Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu 265 Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val 280 <210> 238 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 238 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys 25 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 70 75 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Gly Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu

Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro Asp

170

175

165

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 180 Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 210 Ala Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 <210> 239 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 239 Met Gly Tyr Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 5 Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 40 Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 75 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr

Asn Asn Leu Ser Val Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

85

100

130 135 140

Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met

185

Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 240

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 240

Met Gly Tyr Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met 170 Glu Asp Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Gly Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 240 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 Ile Ser Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val 280 <210> 241 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 241 Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu

40

35

Ser Cys Gly His Asn Val Ser Ala Glu Glu Leu Ala Gln Thr Arg Ile Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 75 70 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Glu Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Thr Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Ala Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 205 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 210 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val

<210> 242

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 242

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys 20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 190

Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Cys Pro Val 275 280 285

<210> 243

<211> 287

<212> PRT

<213> Artificial Sequence											
<220>											
<pre>&lt;223&gt; Description of Artificial Sequence: Synthetic     peptide</pre>											
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Leu Lys Phe	Phe Gln 20	Leu Leu	Val	Leu 25	Ala	Cys	Leu	Ser	His 30	Phe	Cys
Ser Gly Val	Ile His	Val Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser Cys Gly 50	His Asn	Val Ser 55	Asp	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
His Trp Gln 65	Lys Glu	Lys Lys 70	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met Asn Ile	Trp Pro	Glu Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn Asn Leu	Ser Ile 100	Val Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr Tyr Glu 115	Cys Val	Val Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu His Leu 130	Ala Glu	Val Thr	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro Ser Ile 145	Ser Asp	Phe Glu 150	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile Cys Ser	Thr Ser 165	Gly Gly	Phe	Pro	Glu 170	Pro	His	Leu	Ser	Trp 175	Leu
Glu Asn Gly	Glu Glu 180	Leu Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro Gly Thr 195	Glu Leu	Tyr Thr	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr Thr Asn 210	His Ser	Phe Met 215		Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val Asn Gln 225	Thr Phe	Asn Trp 230	Asn	Thr	Pro	Lys 235	Gln	Glu	His	Phe	Pro 240
Asp Asn Leu	Leu Pro 245	Ser Ala	Ile	Thr	Leu 250	Ile	Ser	Ala	Asn	Gly 255	Ile

Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu 260 265 270

Arg Arg Arg Asr 275	Glu Arg Leu	ı Arg Arg Gli 280	ı Ser Ile His 285	Pro Val							
<210> 244 <211> 288 <212> PRT <213> Artificial Sequence											
<220> <223> Description of Artificial Sequence: Synthetic peptide											
<400> 244 Met Gly Tyr Thr 1	Arg Arg Gln 5	n Gly Ile Se:		Cys Pro Tyr							
Leu Lys Phe Phe		ı Val Leu Ala 25	a Gly Leu Ser	His Leu Cys							
Ser Gly Val Ile	His Val Thr	Lys Glu Va 40	l Lys Glu Val 45	Ala Thr Leu							
Pro Cys Gly His	Asn Val Ser 55		ı Leu Ala Gln 60	Thr Arg Ile							
His Trp Gln Lys	Glu Lys Lys 70	s Met Val Le	ı Thr Met Met 75	Ser Gly Asp 80							
Met Asn Ile Trp	Pro Glu Tyr 85	t Lys Asn Arg	-	Asp Ile Thr 95							
Asn Asn Leu Ser 100		e Leu Ala Le 105	ı Arg Pro Ser	Asp Glu Gly 110							
Thr Tyr Glu Cys	Val Val Leu	ı Lys Tyr Gl	ı Lys Asp Ala 125	Phe Lys Arg							
Glu His Leu Ala 130	Glu Val Met 135	_	l Lys Ala Asp 140	Phe Pro Thr							
Pro Ser Ile Thr 145	Asp Phe Glu 150	ı Ile Pro Pr	o Ser Asn Ile 155	Arg Arg Ile 160							
Ile Cys Ser Thr	Ser Gly Gly 165	y Phe Pro Gla		Phe Trp Leu 175							
Glu Asn Gly Glu 180		n Ala Ile Ass 185	n Thr Thr Val	Ser Gln Asp 190							
Pro Gly Thr Glu	ı Leu Tyr Ala	a Val Ser Se 200	r Lys Leu Asp 205								
Thr Thr Asn His	Asn Phe Met 215	_	e Lys Tyr Gly 220	His Leu Arg							

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val <210> 245 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 245 Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 5 Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Leu Cys 25 20 Ser Gly Val Ile His Met Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 105 110 Thr Tyr Glu Cys Val Ala Leu Lys Tyr Glu Lys Asp Ala Phe Lys Gln 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met 170

Glu Asp Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp

180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met
195 200 205

Thr Ala Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
260 265 270

Glu Arg Arg Arg Asn Glu Arg Leu Arg Glu Ser Val Cys Pro Val 275 280 285

<210> 246

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 246

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Gly Leu Ala Cys Leu Ser His Phe Cys 20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

145 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 165 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 <210> 247 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 247 Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 25 Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 65 70 75 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg Lys His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 180 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asn Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val His Pro Val 280 285 <210> 248 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 248 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 5 Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 40

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile

50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 75 70 Met Asn Ile Trp Pro Glu His Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 100 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 135 Pro Ser Ile Thr Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 145 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 180 185 Pro Gly Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val

<210> 249

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 249

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Pro Gly Asp 75 Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Arg Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Ala Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205 Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 235 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 245 Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Ser Leu Ser His Phe Cys

<210> 250

<211> 288

<212> PRT

<213> Artificial Sequence

Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 250

Met Ser His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr

1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Gly Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Gly 65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr 130 140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp 180 185 190

Pro Gly Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn Arg Ser Phe Val Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro 225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg

Glu Arg Arg 275	Arg Asn	Glu Arg	Leu 280	Arg	Arg	Glu	Ser	Val 285	Arg	Pro	Val
<210> 251 <211> 288 <212> PRT <213> Artifi	cial Sec	quence									
<220> <223> Descri peptid	_	Artifi	cial	Sequ	ience	e: Sy	/nthe	etic			
<400> 251 Met Gly Tyr '	Thr Arg 5	Arg Gln	Gly	Thr	Ser 10	Pro	Ser	Lys	Cys	Pro 15	Tyr
Leu Lys Phe	Phe Gln 20	Leu Leu	Val	Leu 25	Ala	Cys	Leu	Ser	His 30	Phe	Cys
Ser Gly Val 35	Ile His	Val Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser Cys Gly 3	His Asn	Val Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
Tyr Trp Gln :	Lys Glu	Lys Lys 70	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met Asn Ile	Trp Pro 85	Glu Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn Asn Leu	Ser Ile 100	Val Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr Tyr Glu 115	Cys Val	Val Leu	Glu 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu His Leu . 130	Ala Glu	Val Met 135	Leu	Ser	Val		Ala 140		Phe	Pro	Thr
Pro Ser Ile 145	Ser Asp	Phe Glu 150	Ile	Pro	Pro	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile Cys Ser	Thr Ser 165	Gly Gly	Phe	Pro	Glu 170	Pro	His	Leu	Ser	Trp 175	Leu
Glu Asn Gly	Glu Glu 180	Leu Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro Gly Thr	Glu Leu	Tyr Ala	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr Thr Asn 1	His Ser	Phe Met 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg

Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro

225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 245 250 255

Ile Phe Val Ile Cys Cys Leu Ala Tyr Cys Phe Ala Pro Arg Cys Arg 260 265 270

Gly Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 252

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 252

Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr
1 5 10 15

Leu Asn Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys
20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Pro Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met
165 170 175

Glu Asp Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp 180 185 190 Pro Gly Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 220 210 Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro 235 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Lys Gly 250 255 245 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Trp Arg 265 Glu Arg Lys Ser Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 280 285 <210> 253 <211> 880 <212> DNA <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic nucleotide sequence atgggccaca cgctgaggcc gggaactcca ctgcccaggt gtctacacct caagctctgc 60 ctgctcttgg cgctggcggg tctccacttc tcttcaggta tcagccaggt caccaagtcg 120 gtgaaagaaa tggcagcact gtcctgtgat tacaacattt ctatcgatga actggcgaga 180 atgcgcatat actggcagaa ggaccaacag atggtgctga gcatcatctc tgggcaagtg 240 gaaqtqtggc ctgagtacaa aaaccgcacc ttccccgaca tcattaacaa cctctccctt 300 atgatectgg cactgegeet gteggacaag ggeaectaca cetgegtggt teagaagaat 360 gagaacqqqt ctttcagacq qqaqcacctg acctccqtga cactgtccat cagagctgac 420 ttccctgtcc ctagcataaa tgatcttgga aatccatctc ctaatatcag aaggctaatt 480 tgctcaacct ctggaggttt tccaaggccc cacctctact ggttggaaaa tggagaagaa 540 ttaaatgcta ccaacacaac actgtcccaa gatcctgaaa ccaagctcta catgattagc 600 agtgaactgg atttcaacat gacaagcaat cacagcttct tgtgtcttgt caagtatgga 660 gacttaacag tgtcacagac cttctactgg caagaatcca aaccaacccc ttctgctaat 720 cagcacctga cctggaccat tattatccca gtctcagcat ttgggatttc tgtgatcatt 780 qcaqttatac taacatgcct gacctgcaga aatgctgcaa tacgcagaca gagaagggag 840 aatgaagtgg aaatgcaaag ttgctctcag tctccatgag 880 <210> 254 <211> 891 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic nucleotide sequence

<400> 254

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cagetettgg tgeteactgg tettttttae ttetgtteag geateaceee aaagagtgeg 120
accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
eccegtattg tgatectgge tetgegeetg teggacagtg geacetaeae etgtgttatt 360
cagaagectg atttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
atcagagetg acttecetgt cectaceata aatgatettg gaaateeate tectaatate 480
agaaqqctaa tttgctcaac ctctqqaqqt tttccaaggc cccacctcta ctggttggaa 540
aatqqaqaaq aattaaatqc taccaacaca acactqtccc aaqatcctqa aaccaaqctc 600
tacatgatta gcagtgaact ggatttcaac atgacaagca atcacagctt cttgtgtctt 660
gtcaagtatg gagacttaac agtgtcacag accttctact ggcaagaatc caaaccaacc 720
ccttctqcta atcaqcacct qacctqqacc attattatcc cagtctcagc atttgggatt 780
tctqtqatca ttqcaqttat actaacatqc ctqacctgca gaaatgctgc aatacgcaga 840
cagagaaggg agaatgaagt ggaaatgcaa agttgctctc agtctccata g
<210> 255
<211> 889
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     nucleotide sequence
<400> 255
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cagetettqq tgeteactqq tettttttac ttetqttcaq geatcaceec aaagaqtgtq 120
accaaaaqaq tqaaaqaaac aqtaatqcta tcctqtqatt acaacacatc cactgaaqaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
eccegtattg tgatectgge tetgegeetg teggacagtg geacetaeae etgegtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cctccgtgag gttaatgatc 420
agagetgaet tecetgteee taccataaat gatettggaa atecatetee taatateaga 480
aggetaattt geteaacete tggaggtttt ceaaggeece acetetactg gttggaaaat 540
ggagaagaat taaatgctac caacacaaca ctgccccaag atcctgaaac caagctctac 600
atgattagca gtgaactgga tttcaacatg acaagcaatc acagcttctt gtgtcttgtc 660
aagtatggag acttaacagt gtcacagacc ttctactggc aagaatccaa accaacccct 720
tctqctaatc aqcacctqac ctqqaccatt attatcccaq tctcaqcatt tqqqatttct 780
qtqatcattq caqttatact aacatqcctq acctqcaqaa atqctqcaat acqcaqacaq 840
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
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ccccgtattg tgatcctggc tctgcgcctg tcggacaagg gcacctacac ctgcgtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cttccgtgag gttaatgatc 420
agagetgaet tecetgteee taccataaat gatettggaa atceatetee taatateaga 480
aggetaattt geteaacete tggaggtttt ceaaggeece acetetaetg gttggaaaat 540
ggagaagaat taaatgctac caacacaaca ctgtcccaag atcctgaaac caagctctac 600
atgattagca gtgaactgga tttcaacatg acaagcaatc acagcttctt gtgtcttgtc 660
aagtatggag acttaacagt gtcgcagacc ttctactggc aagaatccaa accaacccct 720
totgotaato agoacotgao otggacoatt attatocoag totoagoatt tgggatttot 780
qtqatcattq caqttatact aacatgcctg acctgcagaa atgctgcaat acgcagacag 840
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                                                                  888
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accaaaaqaq tqaaaqaaac aqtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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ccccgtattg tgatcctggc tctgcgcctg tcggacagtg gcacctacac ctgtgttatt 360
cagaagectg atttgaaagg ggettataaa etggageace tgaetteegt gaggttaatg 420
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agaaggetaa tttgeteaac etetggaggt ttteeaagge eeeaceteta etggttggaa 540
aatqqaqaaq aattaaatqc taccaacaca acactqtccc aagatcctga aaccaagctc 600
tacatgatta gcagtgaact ggatttcaac atgacaagca atcacagctt cttgtgtctt 660
gtcaagtatg gagacttaac agtgtcacag accttctact ggcaagaatc caaaccaacc 720
ccttctgcta atcagcacct gacctggacc attattatcc cagtctcagc atttgggatt 780
tctgtgatca ttgcagttat actaacatgc ctgacctgca gaaatgctgc aatacgcaga 840
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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qqaqaaqaat taaatgctac caacacaaca gtttcccaag atcctggaac tgagctctac 600
atgattagca gtgaactgga tttcaatgtg acaaataacc acagcatcgt gtgtctcatc 660
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cccattgatc agettecatt etgggteatt ateccagtaa gtggtgettt ggtgeteact 780
qcqqtaqttc tctactqcct qqcctqcaqa catqttqcqa gqtqgaaaag aacaagaagg 840
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ggaaaagtgc aggtgtggcc tgagtacaag aaccgcacca tcactgacat gaacgataac 300
ccccqtattq tqatcctqqc tctqcqcctq tcqqacaagg gcacctacac ctgcgtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cctccgtgac actgtccatc 420
agagetgaet tteetgteee taccataaat gatettggaa atecatetee taatateaga 480
aggetaattt geteaacete tggaggtttt ceaaggeece acetetaetg gttggaaaat 540
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atgattagca gtgaactgga tttcaacatg acaagcaatc acagcttctt gtgtcttgtc 660
aagtatggag acttaacagt gtcacagacc ttctactggc aagaatccaa accaacccct 720
tetgetaate ageacetgae etggaceatt attateeegg teteageatt tgggatttet 780
gtgatcattg cagttatact aacatgcctg acctgcagaa atgctgcaat acgcagacag 840
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ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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ccccgtattg tgatcctggc tctgcgcctg tcggacaagg gcacctacac ctgcgtggtt 360
cagaagaatg agaacgggtc tttcagacgg gagcacctga cctccgtgac actgtccatc 420
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aagtatggag acttaacagt gtcacagacc ctctactggc aagaatccaa accaacccct 720
totgotaato agoacotgao otggacoatt attatocoag totoagoatt tgggatttot 780
qtqatcattq caqttatact aacatqcctq acctqcaqaa atqctqcaat acgcagacag 840
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<210> 261
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agaaggetaa tttgeteaac etetggaggt ttteeaagge eecaceteta etggttggaa 540
aatggagaag aattaaatgc taccaacaca acactgtccc aagatcctga aaccaagctc 600
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tctqtgatca ttgcagttat actaacatgc ctgacctgca gaaatgctgc aatacgcaga 840
cagagaaggg agaatgaagt ggaaatgcaa agttgctctc agtctccatg a
<210> 262
<211> 910
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<220>
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     nucleotide sequence
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accaaaagag tgaaagaaac agtaatgcta tcctgtgatt acagcacatc cactgaagaa 180
ctgacaagcc ttcggatcta ttggcaaaag gatagtaaaa tggtgctggc catcctgcct 240
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ggagaagaac taaacqccqt caacacgacg gttgaccagg atttggacac ggagctctac 600
agcgtcggca gtgaactgga tttcaatgtg acaaataacc acagcatcgt gtgtctcatc 660
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Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr Val

210 215 220

Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro Ser Ala Asn 225 230 235 240

Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala Phe Gly Ile 245 250 255

Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys Arg Asn Ala 260 265 270

Ala Ile Arg Arg Gln Arg Glu Asn Glu Val Glu Met Gln Ser Cys 275 280 285

Ser Gln Ser Pro 290

<210> 264

<211> 296

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 264

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Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Ala Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu 50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 180 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 230 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Pro Val Ser 250 Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Glu Asn Glu Val Glu 280 285 Met Gln Ser Cys Ser Gln Ser Pro <210> 265 <211> 295 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 70 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr 170 Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Pro 180 185 Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe 200 Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp 210 Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro 230 Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala 250 Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys 260 Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu Met 280 Gln Ser Cys Ser Gln Ser Pro 290 <210> 266 <211> 295 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 266 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

35 40 45

Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp Phe 130 135 Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg 150 155 Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr 170 Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser 180

Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe

200

Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp 210 215 220

Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro 225 230 235 240

Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala 245 250 255

Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys 260 265 270

Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu Met 275 280 285

Gln Ser Cys Ser Gln Ser Pro 290 295

<210> 267

<211> 296

<212> PRT

<213> Artificial Sequence

<220>

## <223> Description of Artificial Sequence: Synthetic peptide

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Ser G	Bly	Ile 35	Thr	Pro	Lys	Ser	Val 40	Thr	Lys	Arg	Val	Lys 45	Glu	Thr	Val
Met I	Leu 50	Ser	Cys	Asp	Tyr	Ser 55	Thr	Ser	Thr	Glu	Glu 60	Leú	Thr	Ser	Leu
Arg I 65	le	Tyr	Trp	Gln	Lys 70	Asp	Ser	Lys	Met	Val 75	Leu	Ala	Ile	Leu	Pro 80
Gly I	yys	Val	Gln	Val 85	Trp	Pro	Glu	Tyr	Lys 90	Asn	Arg	Thr	Ile	Thr 95	Asp
Met A	Asn	Asp	Asn 100	Pro	Arg	Ile	Val	Ile 105	Leu	Ala	Leu	Arg	Leu 110	Ser	Asp
Ser G	∃ly	Thr 115	Tyr	Thr	Cys	Val	Ile 120	Gln	Lys	Pro	Asp	Leu 125	Lys	Gly	Ala
Tyr I	ys 130	Leu	Glu	His	Leu	Thr 135	Ser	Val	Arg	Leu	Met 140	Ile	Arg	Ala	Asp
Phe F 145	Pro	Val	Pro	Thr	Ile 150	Asn	Asp	Leu	Gly	Asn 155	Pro	Ser	Pro	Asn	Ile 160
Arg A	Arg	Leu	Ile	Cys 165	Ser	Thr	Ser	Gly	Gly 170	Phe	Pro	Arg	Pro	His 175	Leu
Tyr 1	rp	Leu	Glu 180	Asn	Gly	Glu	Glu	Leu 185	Asn	Ala	Thr	Asn	Thr 190	Thr	Leu
Ser G	ln	Asp 195	Pro	Glu	Thr	Lys	Leu 200	Tyr	Met	Ile	Ser	Ser 205	Glu	Leu	Asp
Phe A	Asn 210	Met	Thr	Ser	Asn	His 215	Ser	Phe	Leu	Cys	Leu 220	Val	Lys	Tyr	Gly
Asp I 225	Leu	Thr	Val	Ser	Gln 230	Thr	Phe	Tyr	Trp	Gln 235	Glu	Ser	Lys	Pro	Thr 240
Pro S	Ser	Ala	Asn	Gln 245	His	Leu	Thr	Trp	Thr 250	Ile	Ile	Ile	Pro	Val 255	Ser
Ala F	Phe	Gly	Ile 260	Ser	Val	Ile	Ile	Ala 265	Val	Ile	Leu	Thr	Cys 270	Leu	Thr
Cys A	Arg	Asn 275	Ala	Ala	Ile	Arg	Arg 280	Gln	Arg	Arg	Glu	Asn 285	Glu	Val	Glu

<210> 268 <211> 302 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 268 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Ser Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 70 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 115 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Tyr 165 170 Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe 195 200

Met Gln Ser Cys Ser Gln Ser Pro

Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu

215

Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala 250 Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu 280 Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 269 <211> 295 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 269 Met Asp His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 130 135 140 Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg 150 155 Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr

Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro

230

165 170 175

Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser 180 185 190

Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe 195 200 205

Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp 210 215 220

Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro 225 230 235 240

Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala 245 250 255

Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys 260 265 270

Arg Asn Ala Ala Ile Arg Arg Gln Arg Glu Asn Glu Val Glu Met 275 280 285

Gln Ser Cys Ser Gln Ser Pro 290 295

<210> 270

<211> 295

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 270

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20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val 35 40 45

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu
50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe 120 Arg Arg Glu His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe 130 135 Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg 150 155 Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu Tyr 170 Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser 180 Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp Phe 200 Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr Val Ser Gln Thr Leu Tyr Trp Gln Glu Ser Lys Pro Thr Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala 250 Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr Cys 260 Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu Met 280 285 Gln Ser Cys Ser Gln Ser Pro <210> 271 <211> 296 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide Met Gly His Thr Val Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 25 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val

Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu 55 Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Pro Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 205 Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly 210 215 Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser 245 250 255 Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 260 265 Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu 280 Met Gln Ser Cys Ser Gln Ser Pro 290 295

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
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Ser	Gly	Ile 35	Thr	Pro	Lys	Ser	Val 40	Thr	Lys	Arg	Val	Lys 45	Glu	Thr	Val
Met	Leu 50	Ser	Cys	Asp	Tyr	Ser 55	Thr	Ser	Thr	Glu	Glu 60	Leu	Thr	Ser	Leu
Arg 65	Ile	Tyr	Trp	Gln	Lys 70	Asp	Ser	Lys	Met	Val 75	Leu	Ala	Ile	Leu	Pro 80
Gly	Lys	Val	Gln	Val 85	Trp	Pro	Glu	Tyr	Lys 90	Asn	Arg	Thr	Phe	Pro 95	Asp
Ile	Ile	Asn	Asn 100	Leu	Ser	Leu	Met	Ile 105	Leu	Ala	Leu	Arg	Leu 110	Ser	Asp
Arg	Gly	Thr 115	Tyr	Thr	Cys	Val	Val 120	Gln	Lys	Asn	Glu	Asn 125	Gly	Ser	Phe
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Pro 145	Val	Pro	Ser	Ile	Thr 150	Asp	Ile	Gly	His	Pro 155	Ala	Pro	Asn	Val	Lys 160
Arg	Ile	Arg	Cys	Ser 165	Ala	Ser	Gly	Gly	Phe 170	Pro	Glu	Pro	Arg	Leu 175	Ala
Trp	Met	Glu	Asp 180	Gly	Glu	Glu	Leu	Asn 185	Ala	Val	Asn	Thr	Thr 190	Val	Asp
Gln	Asp	Leu 195	Asp	Thr	Glu	Leu	Tyr 200	Ser	Val	Gly	Ser	Glu 205	Leu	Asp	Phe
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Leu 225	Ser	Val	Ser	Gln	Ile 230	Phe	Pro	Trp	Ser	Lys 235	Pro	Lys	Gln	Glu	Pro 240
Pro	Ile	Asp	Gln	Leu 245	Pro	Phe	Trp	Val	Ile 250	Ile	Pro	Val	Ser	Gly 255	Ala
Leu	Val	Leu	Thr 260	Ala	Val	Val	Leu	Tyr 265	Cys	Leu	Ala	Arg	Arg 270	His	Val

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Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly

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gataacctgc tcccatcctg ggccattatc ctaatctcag taaatggaat ttttgtgata 780
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<212> DNA
<213> Bovine sp.
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cagetteeat tetgggteat tateceagta agtggtgett tggtgeteac tgeggtagtt 780
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Ser	Gly	Val 35	Ile	His	Val	Thr	Lys 40	Glu	Val	Lys	Glu	Val 45	Ala	Thr	Leu
Ser	Cys 50	Gly	His	Asn	Val	Ser 55	Val	Glu	Glu	Leu	Ala 60	Gln	Thr	Arg	Ile
Tyr 65	Trp	Gln	Lys	Glu	Lys 70	Lys	Met	Val	Leu	Thr 75	Met	Met	Ser	Gly	Asp 80
Met	Asn	Ile	Trp	Pro 85	Glu	Tyr	Lys	Asn	Arg 90	Thr	Ile	Phe	Asp	Ile 95	Thr
Asn	Asn	Leu	Ser 100	Ile	Val	Ile	Leu	Ala 105	Leu	Arg	Pro	Ser	Asp 110	Glu	Gly
Thr	Tyr	Glu 115	Cys	Val	Val	Leu	Lys 120	Tyr	Glu	Lys	Asp	Ala 125	Phe	Lys	Arg
Glu	His 130	Leu	Ala	Glu	Val	Thr 135	Leu	Ser	Val	Lys	Ala 140	Asp	Phe	Pro	Thr
Pro 145	Ser	Ile	Ser	Asp	Phe 150	Glu	Ile	Pro	Thr	Ser 155	Asn	Ile	Arg	Arg	Ile 160
Ile	Cys	Ser	Thr	Ser 165	Gly	Gly	Phe		Glu 170	Pro	His	Leu	Ser	Trp 175	Leu
Glu	Asn	Gly	Glu 180	Glu	Leu	Asn	Ala	Ile 185	Asn	Thr	Thr	Val	Ser 190	Gln	Asp
Pro	Glu	Thr 195	Glu	Leu	Tyr	Ala	Val 200	Ser	Ser	Lys	Leu	Asp 205	Phe	Asn	Met
Thr	Thr 210	Asn	His	Ser	Phe	Met 215	Cys	Leu	Ile	Lys	Tyr 220	Gly	His	Leu	Arg
Val 225	Asn	Gln	Thr	Phe	Asn 230	Trp	Asn	Thr	Thr	Lys 235	Gln	Glu	His	Phe	Pro 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly

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Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
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Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 275 280 285

<210> 279

<211> 288

<212> PRT

<213> Macaca sp.

<400> 279

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Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
50 55 60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125

Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 130 135 140

Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 150 155 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro Arg Leu Ser Trp Leu 165 170 175

Glu Asn Gly Glu Glu Leu Asn Ala Ile Ser Thr Thr Val Ser Gln Asp 180 185 190

Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 210 215 220 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr His Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Arg Asn Glu Thr Leu Arg Arg Glu Ser Val Arg Pro Val 280 285 <210> 280 <211> 296 <212> PRT <213> Bovine sp. <400> 280 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro 75 Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 155 150 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Leu Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp

Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly 210 Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 230 225 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser 245 250 Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 270 Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Glu 275 280 Met Gln Ser Cys Ser Gln Ser Pro <210> 281 <211> 299 <212> PRT <213> Oryctolagus cuniculus <400> 281 Met Gly His Thr Leu Arg Pro Gly Thr Pro Leu Pro Arg Cys Leu His 10 Leu Lys Leu Cys Leu Leu Leu Ala Leu Ala Gly Leu His Phe Ser Ser Gly Ile Ser Gln Val Thr Lys Ser Val Lys Glu Met Ala Ala Leu Ser 35 Cys Asp Tyr Asn Ile Ser Ile Asp Glu Leu Ala Arg Met Arg Ile Tyr 55 Trp Gln Lys Asp Gln Gln Met Val Leu Ser Ile Ile Ser Gly Gln Val 75 Glu Val Trp Pro Glu Tyr Lys Asn Arg Thr Phe Pro Asp Ile Ile Asn 85 Asn Leu Ser Leu Met Ile Leu Ala Leu Arg Leu Ser Asp Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Asn Glu Asn Gly Ser Phe Arg Arg Glu 115 His Leu Thr Ser Val Thr Leu Ser Ile Arg Ala Asp Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val Lys Arg Ile Arg 160 155

Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro Arg Leu Ala Trp Met Glu

165 170 175

Asp Gly Glu Leu Asn Ala Val Asn Thr Thr Val Asp Gln Asp Leu 180 185 190

Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp Phe Asn Val Thr
195 200 205

Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly Glu Leu Ser Val 210 215 220

Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu Pro Pro Ile Asp 225 230 235 240

Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly Ala Leu Val Leu 245 250 255

Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His Val Ala Arg Trp
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Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr Glu Arg Leu Ser 275 280 285

Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295

<210> 282

<211> 292

<212> PRT

<213> Felis domesticus

<400> 282

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Ser Gly Ile Ile Gln Val Asn Lys Thr Val Glu Glu Val Ala Val Leu 35 40 45

Ser Cys Asp Tyr Asn Ile Ser Thr Lys Glu Leu Thr Glu Ile Arg Ile 50 55 60

Tyr Trp Gln Lys Asp Asp Glu Met Val Leu Ala Val Met Ser Gly Lys 65 70 75 80

Val Gln Val Trp Pro Lys Tyr Lys Asn Arg Thr Phe Thr Asp Val Thr 85 90 95

Asp Asn His Ser Ile Val Ile Met Ala Leu Arg Leu Ser Asp Asn Gly
100 105 110

Lys Tyr Thr Cys Ile Ile Gln Lys Ile Glu Lys Gly Ser Tyr Lys Val 115 120 125 Lys His Leu Thr Ser Val Met Leu Leu Val Arg Ala Asp Phe Pro Val 135 Pro Ser Ile Thr Asp Leu Gly Asn Pro Ser His Asn Ile Lys Arg Thr 150 155 Met Cys Leu Thr Ser Gly Gly Phe Pro Lys Pro His Leu Ser Trp Leu 170 Glu Asn Glu Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Ile Ser Ser Glu Leu Asp Phe Asn Met 200 Thr Asn Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asn Leu Leu Val Ser Gln Ile Phe Asn Trp Gln Lys Ser Glu Pro Gln Pro Ser Asn 230 Asn Gln Leu Trp Ile Ile Ile Leu Ser Ser Val Val Ser Gly Ile Val 255 245 250 Val Ile Thr Ala Leu Thr Leu Arg Cys Leu Val His Arg Pro Ala Ala 265 260 Arg Trp Arg Gln Arg Glu Met Gly Arg Ala Arg Lys Trp Lys Arg Ser 280 His Leu Ser Thr 290 <210> 283 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Consensus sequence <400> 283 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro

65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 145 150 155 160

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 175

Tyr Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val 180 185 190

Ser Gln Asp Pro Asp Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly 245 250 255

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 260 265 270

Val Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

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<210> 284

<211> 303

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
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<223> Gly or deleted
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<221> MOD\_RES

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<222> (177)
<223> Cys or Tyr
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<222> (192)
<223> Val or Leu
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<222> (197)
<223> Gly or Glu
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<221> MOD RES
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<223> Gly or Asp
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<221> MOD_RES
<222> (215)
<223> His or Arg
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<221> MOD RES
<222> (218)
<223> Ala or Val
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<221> MOD_RES
<222> (227)
<223> Ser or Leu
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<221> MOD RES
<222> (249)
<223> Trp, Leu or Arg
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<221> MOD_RES
<222> (261)
<223> Ala or Thr
<220>
<221> MOD_RES
<222> (263)
<223> Val, Ala or Ile
<220>
<221> MOD RES
<222> (267)
<223> Arg or Cys
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<221> MOD\_RES <222> (268) <223> Pro or Leu <220> <221> MOD\_RES <222> (273) <223> Gly or Val <400> 284 Met Gly His Thr Met Xaa Trp Xaa Ser Leu Pro Pro Lys Xaa Pro Cys Leu Xaa Xaa Kaa Gln Leu Leu Val Leu Thr Xaa Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Xaa Thr Ser Thr Glu Xaa Leu Thr Ser Leu 50 Arg Ile Tyr Trp Xaa Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 Met Asn Asp Asn Xaa Arg Ile Val Ile Xaa Ala Leu Arg Xaa Ser Asp 100 Xaa Gly Thr Tyr Thr Cys Val Xaa Gln Lys Pro Xaa Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Xaa Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Xaa Xaa Xaa Asp Leu Gly Asn Pro Ser Pro Asn Ile Arg Arg Leu Ile Cys Ser Xaa Xaa Kaa Gly Phe Pro Arg Pro His Leu 170 Xaa Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Xaa 180 Ser Gln Asp Pro Xaa Thr Xaa Leu Tyr Met Ile Ser Ser Glu Leu Xaa 200 Phe Asn Val Thr Asn Asn Xaa Ser Ile Xaa Cys Leu Ile Lys Tyr Gly 215 Glu Leu Xaa Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235

<220>

Pro Pro Ile Asp Gln Leu Pro Phe Xaa Val Ile Ile Pro Val Ser Gly 250 245 Ala Leu Val Leu Xaa Ala Xaa Val Leu Tyr Xaa Xaa Ala Cys Arg His 265 Xaa Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 280 275 Glu Arq Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly 295 <210> 285 <211> 303 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 285 Met Gly His Thr Met Lys Trp Arg Ser Leu Pro Pro Lys Arg Pro Cys 5 Leu Trp Pro Ser Gln Leu Leu Val Leu Thr Asp Leu Phe Tyr Phe Cys 25 20 Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Pro Ser Asp 100 105 Lys Gly Thr Tyr Thr Cys Val Val Gln Lys Pro Val Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 130 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile

170

Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu

Cys Trp Leu Glu Asn Gly Glu Glu Leu Asn Ala Thr Asn Thr Thr Val

180 185 190

Ser Gln Asp Pro Gly Thr Glu Leu Tyr Met Ile Ser Ser Glu Leu Gly 195 200 205

Phe Asn Val Thr Asn Asn His Ser Ile Ala Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 225 230 235 240

Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Pro Val Ser Gly
245 250 255

Ala Leu Val Leu Ala Ala Val Val Leu Tyr Arg Pro Ala Cys Arg His 260 265 270

Gly Ala Arg Trp Lys Arg Thr Arg Arg Asn Glu Glu Thr Val Gly Thr 275 280 285

Glu Arg Leu Ser Pro Ile Tyr Leu Gly Ser Ala Gln Ser Ser Gly
290 295 300

<210> 286

<211> 288

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Consensus sequence

<400> 286

Met Gly His Thr Arg Arg Gln Gly Ile Ser Pro Ser Lys Cys Pro Tyr 1 5 10 15

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Phe Cys 20 25 30

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu 35 40 45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 50 55 60

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
65 70 75 80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 85 90 95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
100 105 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 115 120 125 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Ser Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 145 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 235 225 230 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg 265 Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val 285 275 <210> 287 <211> 288 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <220> <221> MOD RES <222> (12) <223> Ser or Pro <220> <221> MOD RES <222> (25) <223> Leu or Met <220> <221> MOD RES <222> (29) <223> Ser or Pro

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<223> Lys or Arg
<220>
<221> MOD RES
<222> (122)
<223> Glu or Asp
<220>
<221> MOD RES
<222> (129)
<223> Glu or Lys
<220>
<221> MOD RES
<222> (164)
<223> Thr or Ala
<220>
<221> MOD_RES
<222> (196)
<223> Glu or Gly
<220>
<221> MOD RES
<222> (219)
<223> Lys or Arg
<220>
<221> MOD RES
<222> (241)
<223> Asp or Asn
<400> 287
Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Xaa Lys Cys Pro Tyr
Leu Lys Phe Phe Gln Leu Leu Val Xaa Ala Cys Leu Xaa His Leu Cys
                                  25
Ser Gly Val Ile His Val Thr Xaa Glu Val Lys Glu Val Ala Thr Leu
         35
                              40
Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
 65
                     70
                                          75
Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
                                 105
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Thr Tyr Glu Cys Val Val Leu Lys Tyr Xaa Lys Asp Ala Phe Lys Arg

115 120 125

Xaa His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 140 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 155 Ile Cys Ser Xaa Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 175 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Xaa Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Ala Asn His Ser Phe Met Cys Leu Ile Xaa Tyr Gly His Leu Arg 210 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 235 Xaa Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Arg Phe Ala Pro Arg Cys Arg 265 Glu Arg Lys Ser Asn Glu Thr Leu Arg Arg Glu Ser Val Cys Pro Val 280 <210> 288

<211> 288

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic peptide

Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Pro Glu Cys Pro Tyr

Leu Lys Phe Phe Gln Leu Leu Val Met Ala Cys Leu Pro His Leu Cys 25

Ser Gly Val Ile His Val Thr Arg Glu Val Lys Glu Val Ala Thr Leu 40 35

Pro Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Pro Ile 50

His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp 75

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr 90 Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 Thr Tyr Glu Cys Val Val Leu Lys Tyr Asp Lys Asp Ala Phe Lys Gln 120 Lys His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Lys Arg Ile Ile Cys Ser Ala Ser Gly Gly Phe Pro Glu Pro His Leu Phe Gly Leu 170 Glu Asn Gly Glu Glu Ile Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 180 Pro Glu Thr Gly Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 200 Thr Ala Asp His Asn Phe Met Cys Leu Ile Arg Tyr Gly His Leu Arg 210 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 230 Asn Asn Pro Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Pro Thr Tyr Arg Phe Ala Pro Gly Cys Arg Glu Arg Lys Ser Asn Glu Thr Leu Arg Arg Glu Ser Val Cys Pro Val 280 <210> 289 <211> 288 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic peptide <400> 289 Met Gly His Thr Arg Arg Gln Gly Thr Ser Pro Ser Lys Cys Pro Tyr 5

Leu Lys Phe Phe Gln Leu Leu Val Leu Ala Cys Leu Ser His Leu Cys

Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu Ser Cys Gly Leu Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile 55 His Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly 105 110 Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg 120 Glu His Leu Ala Glu Val Met Leu Ser Val Lys Ala Asp Phe Pro Thr 135 140 Pro Ser Ile Thr Asp Phe Glu Ile Pro Pro Ser Asn Ile Arg Arg Ile 150 Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Phe Trp Leu 170 Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp 185 Pro Glu Thr Glu Leu Tyr Thr Val Ser Ser Lys Leu Asp Phe Asn Met 195 200 Thr Ala Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg 215 Val Asn Gln Thr Phe Asn Trp Asn Thr Pro Lys Gln Glu His Phe Pro 225 Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Ala Asn Gly 250 Ile Phe Val Ile Cys Cys Leu Thr Tyr Arg Phe Ala Pro Arg Cys Arg 265 Glu Arg Lys Ser Asn Glu Thr Leu Arg Arg Glu Ser Val Cys Pro Val 285 275 280

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<210> 290
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<sup>&</sup>lt;211> 275

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Artificial Sequence

<sup>&</sup>lt;220>

<sup>&</sup>lt;223> Description of Artificial Sequence: Synthetic
 peptide

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 <222> (55)
 <223> Asn or Ser
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 <221> MOD RES
 <222> (56)
 <223> Ala or Thr
 <220>
 <221> MOD_RES
 <222> (113)
 <223> Ser or Lys
 <220>
 <221> MOD_RES
 <222> (120)
 <223> Ile or Val
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 <221> MOD RES
 <222> (123)
 <223> Pro or deleted
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 <221> MOD_RES
 <222> (124)
 <223> Val, Asn or Asp
 <220>
 <221> MOD_RES
 <222> (125)
 <223> Leu or Glu
 <220>
 <221> MOD RES
 <222> (126)
 <223> Lys or Asn
 <220>
 <221> MOD_RES
 <222> (128)
 <223> Ala or Ser
 <220>
 <221> MOD_RES
 <222> (129)
 <223> Tyr or Phe
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<220>

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<222> (130)
<223> Lys or Arg
<220>
<221> MOD RES
<222> (131)
<223> Leu or Arg
<220>
<221> MOD RES
<222> (135)
<223> Ala or Thr
<220>
<221> MOD RES
<222> (138)
<223> Arg or Thr
<220>
<221> MOD RES
<222> (140)
<223> Met or Ser
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<221> MOD RES
<222> (170)
<223> Asp or Gly
<220>
<221> MOD_RES
<222> (193)
<223> Asp or deleted
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<221> MOD_RES
<222> (194)
<223> Gln or deleted
<220>
<221> MOD RES
<222> (195)
<223> Asp or deleted
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<221> MOD RES
<222> (209)
<223> Variable amino acid
<220>
<221> MOD_RES
<222> (211)
<223> Val or Ala
<220>
<221> MOD RES
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<222> (252)

<220> <221> MOD\_RES <222> (253) <223> Leu or Pro <400> 290 Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys 5 Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Xaa Ser Cys Asp Tyr Xaa Xaa Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 Xaa Gly Thr Tyr Thr Cys Val Xaa Gln Lys Xaa Xaa Xaa Xaa Gly Xaa 120 Xaa Xaa Xaa Glu His Leu Xaa Ser Val Xaa Leu Xaa Ile Arg Ala Asp 135 130 Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 150 Lys Arg Ile Arg Cys Ser Ala Ser Gly Xaa Phe Pro Glu Pro Arg Leu 165 170 Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val Xaa Xaa Xaa Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 200 Xaa Asn Xaa Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 230 235 225 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Xaa Xaa Val Ser Gly 250

<223> Ile or Val

Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His

260 265 270

Val Ala Arg 275

<210> 291

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 291

Met Gly His Thr Met Lys Trp Gly Ser Leu Pro Pro Lys Arg Pro Cys

1 10 15

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
35 40 45

Met Leu Ser Cys Asp Tyr Asn Ala Ser Thr Glu Glu Leu Thr Ser Leu
50 55 60

Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
65 70 75 80

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 85 90 95

Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp 100 105 110

Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Val Leu Lys Gly Ala 115 120 125

Tyr Lys Leu Glu His Leu Ala Ser Val Arg Leu Met Ile Arg Ala Asp 130 135 140

Phe Pro Val Pro Ser Ile Thr Asp Ile Gly His Pro Ala Pro Asn Val 145 150 155 160

Lys Arg Ile Arg Cys Ser Ala Ser Gly Asp Phe Pro Glu Pro Arg Leu 165 170 175

Ala Trp Met Glu Asp Gly Glu Glu Leu Asn Ala Val Asn Thr Thr Val 180 185 190

Asp Gln Asp Leu Asp Thr Glu Leu Tyr Ser Val Ser Ser Glu Leu Asp 195 200 205

Ser Asn Val Thr Asn Asn His Ser Ile Val Cys Leu Ile Lys Tyr Gly 210 215 220

Glu Leu Ser Val Ser Gln Ile Phe Pro Trp Ser Lys Pro Lys Gln Glu 235 225 230 Pro Pro Ile Asp Gln Leu Pro Phe Trp Val Ile Ile Leu Val Ser Gly 245 250 Ala Leu Val Leu Thr Ala Val Val Leu Tyr Cys Leu Ala Cys Arg His 265 Val Ala Arg 275 <210> 292 <211> 296 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic <220> <221> MOD RES <222> (9) <223> Thr or Ser <220> <221> MOD RES <222> (35) <223> Ile or Thr <220> <221> MOD\_RES <222> (55) <223> Asn or Ser <220> <221> MOD RES <222> (110) <223> Leu or Pro <220> <221> MOD RES <222> (124) <223> Asp or Val <220> <221> MOD RES <222> (135) <223> Thr or Ala <220> <221> MOD\_RES

<222> (183) <223> Lys or Glu

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<222> (192)
<223> Leu or Val
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<221> MOD_RES
<222> (211)
<223> Met or Thr
<220>
<221> MOD RES
<222> (215)
<223> His or deleted
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<221> MOD RES
<222> (216)
<223> Ser or deleted
<220>
<221> MOD RES
<222> (217)
<223> Phe or deleted
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<221> MOD_RES
<222> (231)
<223> Thr or Ser
<220>
<221> MOD RES
<222> (288)
<223> Lys or Glu
<220>
<221> MOD RES
<222> (290)
<223> Glu or Gln
<400> 292
Met Gly His Thr Met Lys Trp Gly Xaa Leu Pro Pro Lys Arg Pro Cys
Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys
Ser Gly Xaa Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val
Met Leu Ser Cys Asp Tyr Xaa Thr Ser Thr Glu Glu Leu Thr Ser Leu
                          55
Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro
```

70

Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp 90 Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Xaa Ser Asp 105 Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Xaa Leu Lys Gly Ala 120 Tyr Lys Leu Glu His Leu Xaa Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Xaa Glu Leu Asn Ala Thr Asn Thr Thr Xaa 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 200 205 Phe Asn Xaa Thr Ser Asn Xaa Xaa Leu Cys Leu Val Lys Tyr Gly 210 215 Asp Leu Thr Val Ser Gln Xaa Phe Tyr Trp Gln Glu Ser Lys Pro Thr 230 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Pro Val Ser 250 Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr 265 Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Xaa 280 Met Xaa Ser Cys Ser Gln Ser Pro 290 295 <210> 293 <211> 296 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic peptide <400> 293 Met Gly His Thr Met Lys Trp Gly Thr Leu Pro Pro Lys Arg Pro Cys

Leu Trp Leu Ser Gln Leu Leu Val Leu Thr Gly Leu Phe Tyr Phe Cys

20 25 30

Ser Gly Ile Thr Pro Lys Ser Val Thr Lys Arg Val Lys Glu Thr Val Met Leu Ser Cys Asp Tyr Asn Thr Ser Thr Glu Glu Leu Thr Ser Leu Arg Ile Tyr Trp Gln Lys Asp Ser Lys Met Val Leu Ala Ile Leu Pro Gly Lys Val Gln Val Trp Pro Glu Tyr Lys Asn Arg Thr Ile Thr Asp Met Asn Asp Asn Pro Arg Ile Val Ile Leu Ala Leu Arg Leu Ser Asp Ser Gly Thr Tyr Thr Cys Val Ile Gln Lys Pro Asp Leu Lys Gly Ala Tyr Lys Leu Glu His Leu Thr Ser Val Arg Leu Met Ile Arg Ala Asp 135 Phe Pro Val Pro Thr Ile Asn Asp Leu Gly Asn Pro Ser Pro Asn Ile 150 155 Arg Arg Leu Ile Cys Ser Thr Ser Gly Gly Phe Pro Arg Pro His Leu 165 170 Tyr Trp Leu Glu Asn Gly Lys Glu Leu Asn Ala Thr Asn Thr Thr Leu 185 Ser Gln Asp Pro Glu Thr Lys Leu Tyr Met Ile Ser Ser Glu Leu Asp 195 200 Phe Asn Met Thr Ser Asn His Ser Phe Leu Cys Leu Val Lys Tyr Gly Asp Leu Thr Val Ser Gln Thr Phe Tyr Trp Gln Glu Ser Lys Pro Thr 230 Pro Ser Ala Asn Gln His Leu Thr Trp Thr Ile Ile Ile Pro Val Ser Ala Phe Gly Ile Ser Val Ile Ile Ala Val Ile Leu Thr Cys Leu Thr

Met Glu Ser Cys Ser Gln Ser Pro 290 295

275

<210> 294

<211> 26

<212> PRT

285

Cys Arg Asn Ala Ala Ile Arg Arg Gln Arg Arg Glu Asn Glu Val Lys

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<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      peptide
<400> 294
Asn Lys Asp Ser Lys Met Val Val Ala Ile Leu Pro Gly Lys Val Gln
Val Phe Pro Glu Tyr Lys Asn Lys Thr Ile
             20
<210> 295
<211> 26
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
      peptide
<400> 295
Gln Lys Asp Ala Lys Met Val Leu Ala Ile Leu Pro Gly Arg Val Gln
Met Trp Pro Glu Tyr Lys Gln Arg Thr Ile
<210> 296
<211> 8
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Synthetic FLAG
      tag
<400> 296
Asp Tyr Lys Asp Asp Asp Lys
<210> 297
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Illustrative
      conserved peptide
<400> 297
Met Tyr Pro Pro Pro Tyr
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<210> 298
<211> 14
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Illustrative
      non-dimerizing Ig-Fc domain
<400> 298
Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro
<210> 299
<211> 6
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Poly-His tag
<400> 299
His His His His His
<210> 300
<211> 4
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: Illustrative
      factor Xa cleavage site
<400> 300
Ile Glu Gly Arg
 1
<210> 301
<211> 14
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: Synthetic
      peptide
<400> 301
Pro Lys Ser Ser Asp Lys Thr His Thr Ser Pro Pro Ser Pro
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<210> 302
<211> 46
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 302
                                                                   46
acacatagcg ccggcgctag ctgagcaaaa ggccagcaaa aggcca
<210> 303
<211> 60
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 303
aactctgtga gacaacagtc ataaatgtac agatatcaga ccaagtttac tcatatatac 60
<210> 304
<211> 39
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 304
ggcttctcac agagtggcgc gccgtgtctc aaaatctct
                                                                    39
<210> 305
<211> 40
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Primer
<400> 305
ttgctcagct agcgccggcg ccgtcccgtc aagtcagcgt
                                                                    40
<210> 306
<211> 40
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: Primer
<400> 306
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agatetgttt aaacegetga teageetega etgtgeette	40
<210> 307 <211> 40	•
<211> 40 <212> DNA	
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213/ Altilitur bequence	
<220>	
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value bodocaporon or include boquenee. raamor	
<400> 307	
	40
<210> 308	
<211> 53	
<212> DNA	
<213> Artificial Sequence	
<220>	
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•	
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ggatccggta cctctagaga attcggcggc cgcagatctg tttaaaccgc tga	53
<210> 309	
<211> 63	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Primer	
<400> 309	
ggatccactc atctagaaca atggtaccaa tacgaattcg gcggccgcag atctgtttaa	
acc	63
<210> 310	
<211> 16	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: Consensus	
terminator sequence	
<400> 310	
·	16
accaaaacca ggaaga	-0
<210> 311	
<211> 15	
<212> DNA	
<213> Artificial Sequence	